Fiscal Research Program

THE SALES TAX IN GEORGIA : ISSUES AND OPTIONS

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FRP Report No. 1
October 1997

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Executive Summary

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2. The state sales tax rate in Georgia is 4 percent, and counties may add up to an additional 3 percent. Georgia's top current rate, 7 percent, is no longer low for the southeast region.

3. The sales tax has some significant advantages for Georgians, and voters seem to prefer new sales taxes to increases in income or property taxes. One advantage is the relatively small liability per transaction. Many Georgians have no idea how much sales tax they pay over the course of a year. Additional advantages include the fact that taxpayers understand the structure of the sales tax, the sales tax reaches virtually everyone and the state collects tax revenue from consumers who live in other states (e.g., tourists). On the disadvantages side, many Georgians believe the tax is regressive, tax payments are not deductible from the federal income tax (while income and property tax payments are deductible) and the sales tax yield can be surprisingly unstable over the business cycle. Another important disadvantage of the Georgia sales tax is the collection of revenue from numerous firm-to-firm purchases; this revenue increases the cost of doing business in Georgia and masks the true burden of the sales tax to consumers. Based on the recent actions of Georgia lawmakers and voters, the advantages are seen to far outweigh the disadvantages.

4. The volume of taxable sales in Georgia is equivalent to 50 percent of personal income in the state, ranking Georgia 18th highest among the 46 states that levy a retail sales tax. This relatively large sales tax base is more due to the heavy taxation of intermediate goods -- business inputs -- than to the coverage of the base on consumer purchases. In fact, Georgia taxes services more narrowly than do other states. Of 164 services that are taxable in at least one state, Georgia taxes only 35. If all service purchases by consumers were taxed and special interest exemptions were removed, the state government could cut its tax rate below 3 percent and raise the same amount of revenue.

5. The historical revenue-income elasticity of the Georgia sales tax is 0.87, i.e., for every 10 percent growth in state personal income, sales tax revenues automatically grow by only 8.7 percent. The exemption of slow-growing food for home consumption expenditures actually increases the elasticity of the Georgia sales tax base (because it leaves faster growing items in the base), but it does so at a revenue cost equivalent to about 20 percent of total collections. If all services were included in the sales tax base, the natural response of sales tax revenues to growth would rise to a level near that of the Georgia economy.

6. Who pays the Georgia sales tax? A household with an income of $13,700 pays $347 per year, while a household with an income of $57,000 pays $1,200 per year, i.e., wealthier Georgians pay 3.5 times more than poorer Georgians. However, as a share of income, the wealthy pay

a slightly lower percent (2.58 and 2.13 percent respectively for these two income levels). By our estimates, the sales tax is regressive, but not so severely regressive as some critics have argued.

7. The Georgia sales tax discriminates against larger households. We estimate that in 1995, a household of size six paid $680 in sales taxes (2.54 percent of personal income) while a household of size two paid only $535 (2.35 percent of household income). This bias exists because larger households tend to purchase more taxable items than do smaller households. Arguably, with a broader sales tax base, this discrimination would disappear. It would seem counterproductive to allow larger households a greater relief from income taxes, but to structure the sales tax to discriminate against them.

8. There are major policy choices facing the State with regard to the sales tax. First, it could broaden the base to include more services (a revenue gain). Second, it must face up to the issue of whether the food exemption will be extended to local government sales taxes (a revenue loss). Third, it could consider raising the sales tax rate while keeping the base narrow (a revenue gain). Fourth, it could move to eliminate some intermediate goods from the tax base thereby enhancing the economic development potential of the state (a short-term revenue loss). Finally, it could consider moving to less reliance on sales taxation in favor of more reliance on income or property taxes.

9. There is much to recommend the expansion of the sales tax base to services. It would increase the overall elasticity of the sales tax base, it would make the tax less regressive, it would increase fairness across consumers, and it would generate significant revenue. Had the State of Georgia sales tax included all services in 1995, it could have raised the same amount of revenue at a rate of 2.9 percent.

10. Local sales taxes in Georgia require attention. At present, there is a complicated set of rules concerning the cap on the total local rate, and there are five different choices as regards local options (LOST, SPLOST, MARTA, HOST, and the education tax). In some cases food is included in the base, in others it is not. If the sales tax base is extended to services in the future, local governments would benefit, but if the state chooses to increase the state tax rate, they would not. With the sentiment in Georgia running heavily toward replacing property taxes with sales taxes, there is a premium on reforming the local sales tax in a comprehensive way. In particular, the following three issues ought to be considered:

    - a common treatment of food for home consumption;

    - a clear set of rules about local rate ceilings. It would seem appropriate to allow local governments to choose their rates by referendum, rather than prescribing exactly what kind of local sales tax will be allowed. Instead of asking local governments to choose among five different types of tax, a wise course might be to restrict them to a 3 percent (or higher) cap and let the voters decide on the purpose; and

- a clear set of rules about the relationship between property and sales taxes. If sales tax options are to be chosen by referendum, then voters need clear information on any property tax consequences.

11. Specific Recommendations

a. The Legislature should begin a process of gradually bringing services into the sales tax base. Lessons from other states suggest that a phase-in is preferred to a comprehensive overhaul where most services are brought into the base at one time.

b. Voter popular acceptance of new local sales taxes and the exemption of food from some, but not all, local sales taxes is the largest sales tax policy issue now facing the state. State policies towards local governments must now be related to the larger question of how local government expenditures will be financed in the future. The Legislature and the Governor should continue to rethink the entire system of state-local finance.

c. The taxation of business inputs is not healthy for the state economy. The Legislature and the Governor should readdress how the tax on certain inputs can be removed without too seriously compromising revenue yield.

d. The current list of statutory exemptions includes 55 transaction types. This list is too long, and too laden with special interests. It should be reviewed and some of the more obvious special interest exemptions should be eliminated.

e. The Legislature and the Governor should continue to rethink the place of the sales tax in the revenue structure. If it is to occupy its present level of importance, or even a greater importance, then options for reform should be considered. A broadening of the base to include services is preferred to an increase in the tax rate.

I. INTRODUCTION

The sales tax is critically important to the finances of the State of Georgia and to its local governments. The general sales tax financed $16 of every one hundred dollars spent by state and local governments in Georgia in 1992, and $17 of every one hundred dollar increase in expenditures between 1988 and 1992. People are ambiguous in their feelings about the sales tax. While it appears to be more popular than its cousins, the property tax and the income tax, it is frequently maligned as being regressive.

Sales tax policy has been at the center of attention in Georgia in recent years. In 1989, the state government increased the rate from 3 to 4 percent. At the same time, certain food items were exempted from the sales tax, but the change was delayed by a Fulton County Superior Court judge on grounds that the new law was too vague to enforce. The final report of the Joint Revenue Study Commission, issued in 1996, recommended that food be retained in the base but that many categories of services be added to the base. Neither recommendation was accepted. In 1996, a new law removed food purchased for home consumption from the state sales tax base. In 1997, tax rate increases occurred in many local areas. A newly authorized 1 percent levy for school construction was approved by 63 county school districts, and a special 1 percent county sales tax to roll back property taxes was adopted in DeKalb county.

Almost certainly, Georgia's sales tax will change again during the next decade. The following pressures will cause this to happen, with new attention to certain policy questions in these discussions:

- State population and economic growth, urbanization and social policy will pressure the state to make its overall tax system more revenue productive. The sales tax will be part of this overall reform.

- The next recession will increase expenditure needs, through the reformed welfare system, and reveal another side of the food-for-home-consumption exemption as sales tax collections fall.

- The consumption pattern of Georgians is changing. To be fair to all citizens, the tax base must be expanded to reflect these changes.

- The sales tax on some business inputs and unequal sales tax treatment of business outputs poses special problems that may harm state economic development.

- The historical methods for taxing the telecommunications sector may no longer be relevant. The special role of this sector in changing economy calls for a reexamination of the sales tax treatment.

- Equity, fiscal viability and administrative considerations all call for a better harmonization of state and local government sales tax structures. The differential treatment of food under the various taxes will almost certainly be revisited.

- The huge success of the school construction sales tax referendums in 1997 suggests that many local governments will move to replace property taxes with sales taxes.

The purpose of this research is to address such questions. Our goal is not to recommend an immediate set of changes. Rather, it is to evaluate Georgia's sales tax against the norms for a "good" sales tax, to identify problem areas with the state's sales tax, to compare sales tax practices in Georgia with those of other states and to propose and evaluate alternative reform options. We take the longer view of sales tax reform in this paper, but argue that fiscal planners should begin evaluating the options immediately.

The next section of this paper explores the inherent strengths and weaknesses of a retail sales tax. We turn then to a description of the Georgia sales tax (Section III) and to an analysis of its revenue performance in recent years (Section IV). The equity aspects of sales taxation in Georgia are addressed in Section V, and major options for reform are described and evaluated in Section VI. The paper concludes on a note that it is an opportune time for the State Legislature to plan, and to begin implementation of a transition to a Georgia sales tax for the 21st Century.

II. ADVANTAGES AND DISADVANTAGES OF THE SALES TAX

Every tax makes someone worse off, because every tax reduces someone's purchasing power. The hunt for the "right" tax structure therefore, is the hunt for taxes with the least obnoxious features. In this context, the sales tax has both advantages and disadvantages. And like any tax, its place in a state's revenue system depends on how these are weighted. In Georgia as in most states, the advantages appear to far outweigh the disadvantages, and the sales tax is an important component of both state and local revenue systems.[1] However, preferences and politics change over time, and the consumption base which the sales tax reaches has also changed. The opposition to changes in the sales tax has made reform more difficult as well. In this context, it is essential for policy makers to have a firm grasp of what they gain and what they give up by making heavier use of the sales tax.

Advantages

State and local governments in the United States have relied on the sales tax for about 25 percent of total own-source revenues during the past decade. There are good reasons why the sales tax is used so heavily.

One major advantage of a sales tax is that it is perceived by voters as one of the least disliked taxes. The (late) Advisory Commission for Intergovernmental Relations conducted a periodic survey to determine which revenue sources were least popular with Americans.[2] In 1994, the state sales tax was identified by only 14 percent of the people surveyed. By comparison, the property tax was identified by 28 percent of those surveyed, the federal income tax by 27 percent, and the state

[1] In fact, only four U.S. states have chosen not to adopt a retail sales tax.

[2] Advisory Commission on Intergovernmental Relations (1994).

income tax by 7 percent. Three reasons for this relative popularity of the sales tax are that tax payments are generally made in small installments; some of the collections are from business-to-business purchases thereby "hiding" liability from consumers; and visitors to an area pay a portion of the tax. Most individuals do not know how much sales tax they pay in the course of a year, whereas they can usually cite exact liabilities for property and income taxes.[3]

There also is a simplistic appeal to the sales tax. Unlike the property tax, the determination of the base is certain, objective and understandable -- it is simply the retail price paid for a product. Unlike the income tax, there is no complicated set of deductions -- either something is taxable or it is not. And finally, individuals need not file a return, hire a professional preparer, or fear the dreaded audit.

Another advantage is the comfort from knowing that other states use the sales tax heavily. The retail sales tax is an accepted method of financing, not only for the state government but also for cities, counties and even school districts. As of 1993, local governments in 35 states and the District of Columbia were collecting general sales taxes and derived about 13 percent of their revenues from this source.[4] In Georgia, the sales tax accounted for 18 percent of all locally raised revenues in 1993. The acceptability of the sales tax as a local government revenue source is a special advantage when one considers that the alternative is property taxation, arguably the most unpopular of all revenue sources.

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[3] A recent editorial in the *Atlanta Journal Constitution*, written in the afterglow of the local sales tax adoption by 63 counties, describes the popular sentiment exactly. "The dirty secret of some of the erosion of support for public schools in recent years has been the tide of apartment construction. An influx of renters' children can change the character of a school overnight. Renters may pay school taxes indirectly, but they don't have to fork over that four digit check every autumn." (Williams, 1997, page A-12).

[4] United States Bureau of the Census (1996a).

The sales tax has the important, desirable feature that a relatively low tax rate will generate sizable revenue. Low rates give taxpayers the illusion that the burden is not onerous and mask the considerable revenue generating power of the sales tax. Another revenue mobilization characteristic is automatic growth in response to both inflation and real income increases. If public expenditure needs grow in response to inflation and income, then the sales tax meets an important revenue adequacy test for a desirable revenue source.

Sales tax rate and base changes are broad-based in that they touch virtually every taxpayer. This is another significant advantage. "My neighbor and I are both hit by this tax increase, or are favored by this reduction." Income and property tax changes cannot make such a boast. For example, much of the population is not in the income tax net, or have no capital gains income, or does not itemize deductions and therefore may not be effected by an income tax change. Similarly, renters will not directly benefit from a homestead property tax relief program and property tax relief is often targeted on the elderly or the poor. In contrast, everyone participates in the sales tax and is reached by sales tax reform.

Finally, an important advantage is that administration of the Georgia retail sales tax does not present major problems. Certainly the personnel and administrative mechanisms are in place to increase the sales tax rate or expand the base to a number of currently exempt services with minimal administrative or compliance costs. Identifying and registering any retailer of a service who accepts a credit card is relatively inexpensive as is proper compliance for firms with computerized bookkeeping. Here, the sales tax has strong advantages over income and property taxation. These administrative advantages are not permanent. The future may hold some very difficult sales tax administration problems. For example, expansion of mail order sales, new telecommunications

technologies (including internet access) and the proliferation of services and local sales taxes will all present Georgia with new challenges. However, administration of the Georgia sales tax has not required sizable state resources in the past, and there is no reason to believe that administrative costs will accelerate in the very near future.

Disadvantages

The sales tax has some important shortcomings. The most prominent is the perception that it is regressive, i.e., the tax burden falls most heavily on lower income families who spend a greater proportion of their income on taxable goods. In Georgia, the regressivity issue was a driving issue in the 1996 reform, which began a phasing out the of state sales tax on food. While this problem may be exaggerated, it nevertheless is central to the arguments of those who oppose expansion of sales taxation.

The sales tax is also horizontally inequitable, i.e., it does not treat similarly situated families in the same way. Since most services are exempt from the sales tax in Georgia, a large share of consumption is outside the tax base and the sales tax gives an unfair advantage to those who consume these untaxed services (Fox (1992) and Due and Mikesell (1994)). The same unfairness extends to certain types of businesses, i.e., the inputs of certain businesses are heavily taxed while the inputs of others are not.

Sales tax payments are not deductible in computing federal income tax liability. Households that itemize on their federal income tax return, therefore, face a greater net tax burden than they would if a similar amount of revenue were to be raised from the property or income tax. It also follows that a sales tax reduction will benefit residents proportionally more than will an equal

amount of income or property tax reduction, because the federal government does not claim a portion of the relief given to households.

About one-third of the sales tax collections in most states are raised from business purchases (Ring 1989). While consumers may naively believe that businesses should pay sales taxes, this is a negative feature of the sales tax. In practice, the tax raises the price of business inputs and much of this increase is likely to be pyramided forward to consumers in the form of higher retail prices. This pyramiding masks the true burden of the tax to the consumer, i.e., the amount of tax being paid is not apparent. If the tax on business inputs cannot be passed forward to consumers, it must be borne either by labor or the owners of capital. The latter possibility is particularly troublesome as Georgia's competitive position for attracting industry and encouraging expansions would be weakened.[5]

The revenue yield of the sales tax is potentially unstable, i.e., it can oscillate significantly over the business cycle. The degree of instability depends in part on what is in the tax base. For example, purchases of food are relatively stable when compared to the fluctuations in other commodities, and a sales tax base that includes food exhibits more stability. In general, a broader sales tax base, with few exemptions, minimizes revenue fluctuations due to the business cycle. A higher rate on a more narrow base can raise the same level of revenue but could put the state more at risk in periods of economic contraction.

Finally, there is the need for balance in the tax structure, and this acts as a constraint on the growth of the sales tax. Many would argue that it is necessary to keep a balance between sales, income and property taxes in order to keep any of the three from becoming onerous. The Tennessee State Government, for example, raises almost 45 percent of every tax dollar with the general sales

[5] For a discussion of the sales tax as an issue in economic development, see Fox (1996), pp. 249-65.

tax. The result is that sales tax rates are nearing the 9 percent level in certain areas of that state. Georgia balances sales, income and property taxes and so nominal rates have remained at more competitive national levels.

III. THE TAX BASE AND RATE IN GEORGIA

The extent to which a state captures the advantages of the sales tax, and avoids the disadvantages, depends on state choices regarding the definition of the base and level of the rate. In fact, most states adopt structures that depart significantly from a general tax on consumption because they do not tax some transactions at all and apply the tax more than once on other transactions. As will be explained below, Georgia is no exception to this general pattern. The sales tax base in Georgia includes both household and business purchases of selected goods and services, and in some cases, even purchases by governments. Numerous transactions are excluded from the tax base in Georgia, either by specific exclusion or by the absence of statutory inclusion.

The *Official Code of Georgia*, hereafter the *Code*, declares the intention of sales taxation, ". . . to tax the retail purchase, retail sale, rental, storage, use, and consumption of tangible personal property and the services described in this article . . ."[6] The sale of goods is approached differently from the sale of services in the initial description of the tax found in the *Code*: goods are taxed unless specifically exempt while services are exempt unless specifically taxed.

[6] The State of Georgia (1982), Volume 37, p. 145.

Coverage of the Sales Tax

Evaluation of the Georgia sales tax base, and the need for reform, centers around the answer to four questions: 1) to what extent are business inputs taxed; 2) which transactions are specifically exempted by the *Code* and what policy rationale can justify these exemptions; 3) does the tax base include household necessities such as food, clothing, utilities and prescription drugs; 4) which services are taxed in Georgia. These issues are taken up in the next four sections.

Intermediate Goods

One important exemption in Georgia is the purchase of goods that will be further processed, i. e., intermediate goods. The *Code* exempts these goods by declaring that a retail sale does not include a sale for, ". . . resale of tangible personal property or services taxable under this article . .."[7] The Georgia Department of Revenue has the authority to set the specific resale exemption policy since "Sales for resale must be made in strict compliance with the commissioner's rules and regulations".[8] The Georgia Department of Revenue currently uses a vendor declaration process to exempt eligible wholesale transactions (the process is explained in Appendix A on administrative practices).

The exemption is generally given to direct manufacturing and agricultural inputs, and wholesale trade items. Other inputs by these firms, and almost all inputs to other types of firms, are taxed. For example, a computer purchase by any business is taxable. This overhead expenditure is just as important to the production process as direct materials.

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[7] The State of Georgia (1982), p. 148.

[8] Ibid.

A special exemption issue that is attracting attention around the country is the purchase of capital equipment. Equipment is not a direct material input yet it is used to produce taxable output, hence exempt status might be justified. The treatment of this equipment also raises economic development issues. A study by the Minnesota Capital Equipment Advisory Council (1994) concluded that the sales tax treatment of capital equipment is an area where states compete regarding business location decisions. A state that chooses to exempt equipment has an economic development advantage over a state where these purchases are taxed.

Georgia is relatively competitive in exempting the purchases of equipment. The state exempts new and replacement manufacturing capital equipment and also exempts pollution abatement equipment. As may be seen in Table 1, every state in the region offers some sales tax concessions (exemption or a lower rate) to capital equipment purchases. Florida and Tennessee are the only states that fully tax a class of equipment; replacement manufacturing equipment and pollution control equipment, respectively. Only South Carolina matches Georgia's full exemption status for equipment.

Specific Tax Base Exemptions

Fifty-five specific sales tax transaction types are exempted in the *Code*. The exemptions fall in five basic categories, summarized in the Appendix B, and in many cases reveal the strength of special interests in gaining preferential treatment. The narrow specification of these exemptions leads inevitably to horizontal inequities. For example, sales by the Rock Eagle 4-H Center are exempt from the Georgia sales tax but sales by similar not-for-profit firms are not given the same

exemption. Narrowing the scope of an exemption does limit the state's revenue loss per exemption but also creates unfairness among very similar transactions.

The *Code* provides for the following categories of exemption.

1. The first category is transactions by selected public or non-profit agencies. These exemptions account for twenty-two of the fifty-five exemptions. They include purchases by the federal government but also purchases by less obvious non-profit organizations, including blood banks. Some of the exemptions apply only to selected sales by a government or non-profit, including fares by public transit organizations and lottery tickets by the Georgia Lottery Corporation. Other exemptions in this category identify some government or non-profit entity, and exempt a wide range of transactions for that entity only. If a similar entity is not mentioned in the *Code*, a similar transaction will incur sales tax liability.

2. The second exemption category is for products used as manufacturing or agricultural production inputs. Five exemptions cover various materials and equipment. The intent in these exemptions is to reduce the tax pyramiding from these transactions.[9] But, this exemption also ignores "similar industries" where tax collections on equipment lead to higher prices in the finished product.

3. A third category includes sales where interstate commerce concerns have motivated the exemption. For example, these nine exemptions include the sale of aircraft where possession is transferred in Georgia but the aircraft will be used outside Georgia. The sale of fuel to ships for interstate and international commerce may be included in this category. Similar activities such as interstate truck operations, however, are not given a total fuel exemption.[10]

4. The fourth exemption category is sales where the United States government mandates that the retail sales tax will not apply. This type of exemption is given for medical equipment purchases through Medicare or Medicaid, food stamps, or the United States Department of Agriculture's Women, Infants and Children nutrition program. This category differs from the first because these transactions are not direct purchases by a government or non-profit entity but rather are ordinary purchases made with federal transfer payments.

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[9] Agricultural exemptions can be quite specific, e.g., exemption number 27 exempts sugar purchases to beekeepers.

[10] Interstate truck drivers allocate fuel purchases to individual states according to mileage.

5. The last category is the broadest and might be termed "special interest exemptions," e.g., prescription drugs and sales of commercial bait to crabbers. Some, but not all, of these exemptions are the result of political sensitivities. A good example is prescription drugs. The sales tax subcommittee of the Georgia Joint Revenue Structure Commission considered recommending the elimination of prescription drugs exemption, but members expressed discomfort with the idea of raising revenue from this type of transaction. These feelings are difficult to paraphrase but in many cases, members felt that certain transactions were simply above revenue concerns. However, it is noteworthy that Georgia does not extend the pharmaceutical exemption to similar non-prescription spending.

Necessities

The sales tax status for four controversial objects of tax -- non-prescription drugs, food, telecommunications services, and electric and gas utilities -- is compared in Table 2 for Georgia and neighboring states. Neither Georgia nor its neighboring states are generous with respect to these "necessity" items, with the exception of electric and gas utility consumption. Non-prescription drugs are taxed by most neighboring states, but the taxation of telecommunications services is more limited.[11] The inclusion of food in the sales tax base is a controversial question, and about as many states tax as exempt food purchased for home consumption. Due and Mikesell (1994) point out that states in the Northeast and Mid-Atlantic regions offer more generous necessity exemptions while states in the Southeast are less generous. Of Georgia's neighboring states, only Florida extends a full exemption to food purchases. (In fact, Florida is the only state in the region which exempts more than one of the spending classes listed in Table 2). Georgia began a phase-out of the state sales tax on food in 1996.

[11] Georgia exempts toll telephone charges but taxes monthly service fees. The latter are likely more regressive than the former and the state may worsen the equity of the tax with this policy.

Services

Georgia is less aggressive in the taxation of services than other states.[12] A Federation of Tax Administrators study (1994) found that Georgia taxes 35 of a potential 164 service categories. This total is markedly lower than the 155 services identified as taxed in New Mexico, the state with the broadest sales tax base. It is also below the average of 54 services for the 45 states that levy a retail sales tax. Tables 3 through 13 provide a complete listing of the 164 services, their status in Georgia and the number of states that tax each service.

Among the classes of services. Georgia generally taxes a majority of leases, admissions and transportation services. The Georgia sales tax base partially covers utilities, personal services, business services, automotive services and computer services. Storage, professional services, construction, fabrication, installation and repair, finance, insurance and real estate are virtually untaxed in Georgia.[13]

One could conclude from the data presented in Tables 3 to 13 that Georgia is not a leader in the movement to broaden the sales tax base. If a service is taxed by a large number of states, Georgia rarely exempts that service. On the other hand, services which are infrequently taxed in the United States are infrequently taxed in Georgia. For example, only three states tax finance, insurance and real estate services while Georgia taxes none of these services (Table 9). Rentals,

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[12] The *Code* specifically identifies taxable services in Title 48, Chapter 8, Section 2. Any service not specifically mentioned as taxable is either exempt, or its taxable status requires a special ruling by the Georgia Department of Revenue Commissioner. The *Code* section defines the legal terms "retailer," "sale" and "sales price". These definitions allow the Revenue Department to rule on the taxable status of transactions that are not specifically identified as taxable.

[13] Materials or parts associated with construction and fabrication, installation and repair services are taxable.

however, are commonly taxed in other states and they are taxed, with the exception of campground sites, in Georgia.[14]

The revenue consequences of the failure to tax services are considerable. Exempt services (not including housing) represent about 42 percent of the total household consumption. If all of these purchases were in the sales tax base, and fully collected, revenues would be about $1.5 billion higher.[15] This would enable the state government to cut its tax rate to below 3 percent and raise the same amount of revenue.

Overall Tax Base Size

The net effect of Georgia's narrow service taxation, broad necessity taxation and inclusion of business inputs is a sales tax base equivalent to about 62 percent of the state's personal income (Table 14). Collections from items exempt in other states, e.g., food and certain utilities, increase Georgia's relative standing while the exemption of services that are taxed in other states decrease Georgia's tax base relative to other states. Overall, Georgia ranks 9th highest in the nation by this measure of the size of the state tax base. The tax base for all of the states surrounding Georgia also reach a larger than average share of personal income. Florida, despite the exemption of food for home consumption, has a relatively large base because of collections from tourists. Within the region, only Alabama is close to the national average.

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[14] Campground rentals are taxed in 27 states. The other types of services listed in Table 10 are taxed in no less than 45 states.

[15] This figure represents our attempt to capture the level of service purchases by consumers. Obviously, if service purchases by firms were taxed, the revenue total would be considerably higher.

Can we conclude from this computation that Georgia has a broad based sales tax? The answer is "no". Georgia does have a sales tax base that is a high fraction of total personal income, but more because of its heavy taxation of business inputs than because of its broad taxation of final consumption. Moreover, the full elimination of food for home consumption will decrease the Georgia rank considerably. For example, if Georgia had not taxed food in 1994, it's sales tax base rank would have slipped from 9th in the United States to 18th.

What accounts for the wide interstate variation in the relationship between the sales tax base and the level of personal income? How can Hawaii and New Mexico have sales tax bases that are greater than personal income? The answer lies in the extent to which states tax all final consumption, and in the extent to which they tax tourists and business purchases. To investigate this, we carried out a regression analysis to try and explain the variation in this ratio among the 50 states. The results show that the statistically significant determinants of the size of the sales tax base (relative to personal income) is the decision to tax or exempt food and the contribution of tourism to the economy (see Box 1).

Box 1 Determinants of Relative Sales Tax Base Size

This analysis represents an attempt to explain the variation in the size of the ratio of the sales tax base to personal income, using a linear regression. The 46 states using the retail sales tax form the sample for this analysis. Values for the dependent variable are listed in Table 14. The independent variables used are the highest tax rate in the state, whether the state exempts food for home consumption, whether the state exempts residential utilities, the number of personal services taxed in the state, the number of business services taxed in the state and the reliance of the state economy on tourism.

The signs of the regression coefficients follow our expectations, but only the food exemption and tourism reliance are significant. States with a food exemption, *cet. par.*, have an 11.6 percent lower sales tax base ratio, and states with one percent greater tourism reliance have a 1.14 percent greater sales tax ratio.

Box 1 Determinants of Relative Sales Tax Base Size (Continued)

Determinants of the Ratio of the Sales Tax Base to Personal Income

	Coefficient	t statistic[a]
Tax Rate	-0.03	0.02
Food Exemption Dummy Variable	-11.61	2.75
Utility Exemption Dummy Variable	-9.31	1.62
Number of Personal Services Taxed	0.44	0.69
Number of Business Services Taxed	0.89	1.76
Tourism Reliance[b]	1.14	2.73
R^2		0.57

[a] Heteroscedasticity is present in the ordinary least squares estimates. The standard errors have been corrected with the White (1980) method.

[b] "Tourism reliance" is calculated as state lodging (hotel) receipts for 1992, from the *1992 Census of Services*, divided by state personal income for 1992.

The Rate

The state sales tax rate in Georgia is 4 percent. Counties in Georgia may add 0, 1, 2, or 3 percent to the state rate. Georgia's top current rate, 7 percent, is about average for the Southeast region. Low sales tax rates, and infrequent changes, had been a longstanding practice in Georgia (Box 2), but increased local sales tax rates have removed this comparative advantage.

The *Local Option Sales Tax* (LOST) is a county and municipal tax of 1 percent. Its purpose is to offer an alternative to the property tax and, in fact, the property tax bill in the county must reflect the millage rate reduction from the imposition of the sales tax. The county and qualified municipalities who share the tax must agree on a distribution formula for the proceeds and a

referendum must approve the tax. The Local Option Sales Tax is very popular in Georgia; it is now used by 151 of the state's 159 counties.

Box 2 The Stability of State Government Sales Tax Structures in the South

We have compared the historical development of the sales tax in Georgia with that of other states in the region (Alabama, Florida, North Carolina, South Carolina, and Tennessee).

Following the initial sales tax adoption period, all six states in the region standardized their state rates at 3 percent. The rates remained constant for nine years, with the exception of one short-lived cut in Florida. The first state to raise the rate above 3 percent was Alabama in 1964. Over the next thirteen years, three of the other six states followed with increases to 4 percent, and 4.5 percent in the case of Tennessee.

Georgia did not follow this trend until 1989, when the state tax rate in Florida, South Carolina and Tennessee were each 5 percent or higher.

Thus, the Georgia state rate remained relatively low even after the 1989 increase. North Carolina held the lowest rate until that state's 1992 increase to 4 percent.

A *Special Purpose Local Option Sales Tax* (SPLOST) is available for funding county government capital outlay projects. As of January 1, 1995, 125 counties used the Special Purpose Local Option Tax. This optional 1 percent sales tax must also be approved by a referendum. The referendum must state the purpose of the proposed levy, the maximum time that the tax will be levied and the maximum cost of the specific capital outlay project. With the exception of road and bridge purposes, the Special Purpose Local Option Sales Tax can expire early if the stated cost of the project is collected.

Fulton and DeKalb counties add a 1 percent sales tax to partially fund the Metropolitan Atlanta Rapid Transit Authority (MARTA). Proceeds from this tax may be used for transit construction and operation. Under current legislation, the tax rate is scheduled to decrease to ½ of 1 percent in the year 2032.

In the 1995 Georgia legislative session, a local homestead option sales tax (HOST) was authorized. The revenue from this tax is to be used to finance increased homestead exemptions for

county level property taxes. If the HOST revenue is greater than the cost of providing full homestead exemption, the remaining proceeds are to be used to roll back the property tax millage rate for non-homestead property. In 1997, DeKalb County adopted this tax. The legislation enacting the HOST did not provide for an increase in the total local sales tax cap, currently 2 percent, and only 33 of Georgia's 159 counties could at this time possibly enact a HOST. For 31 of these 33 counties, enacting a HOST would push the total rate in the county to 6 percent, eliminating the possibility of using another local sales tax. The use of the sales tax in Georgia's 159 counties (prior to the 1997 referendum) is described in Table 15. These data suggest that, prior to the 1997 referendum, all of the state was approaching the 6 percent maximum.[16]

A 1996 change in the constitution authorizes the imposition of a 1 percent sales tax for education construction and technology purposes. The tax must be imposed by referendum, the base specifically includes food, and the maximum life of the tax is five years. This will effectively increase the sales tax limit to 7 percent in many Georgia counties.

Georgia's local sales taxes have been administered by the State Department of Revenue since their initial authorization. This system is common. Due and Mikesell (1994) identify only 10 states that allow local collection of local sales taxes.[17] Tax base decisions for both the state and local governments are made through state legislation and through Georgia Department of Revenue regulatory policies and special rulings. This lack of local autonomy must be weighed against the primary drawback of local sales tax administration, it opens the possibility of widely different tax bases within a state, and it sacrifices central coordination and possible monitoring.

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[16] Those counties levying a MARTA sales tax or an education tax can have a maximum rate of 7 percent.

[17] They are Alabama, Alaska, Arizona, Colorado, Idaho, Louisiana, Minnesota, Oklahoma, Tennessee and Utah.

The highest state and local sales tax rate found in each state is listed in the right column in Table 14. Georgia's highest tax rate, 6 percent, is also the median for the United States.[18] Alabama and Louisiana use the highest tax rates, 10 and 9 percent respectively. Delaware, Montana, New Hampshire and Oregon do not have a sales tax. The sales tax is only a local revenue source in Alaska.

A comparison of the sales tax rate in Georgia's major cities with the rate in cities in Georgia's border states shows the rate in Georgia to be low (Table 16). From the table, the highest rates in the region are found in Alabama with a rate of 9 percent in Mobile County. The reliance on the tax in Alabama as a city source of revenue is clearly the difference between the sales tax rate in Alabama versus the rate in the other states shown in the table. North Carolina and South Carolina closely resemble Georgia in total rate structure to the state and local governments. Florida and Tennessee both use a state rate of 6 percent, with the cities in Tennessee generally adding local rates that are higher than the 2 percent commonly found in Georgia.

IV. REVENUE PERFORMANCE

The revenue performance of the Georgia sales tax can be evaluated in several ways. The usual approach is to determine whether revenue growth has kept pace with the growth in the state economy as measured by increased growth, i.e., analysis of the revenue-income elasticity. Another important dimension of revenue performance is stability -- how volatile has revenue growth been during recent business cycles? Finally, there is the question of whether the sales tax occupies the

[18] As of 1997, the highest rate is 7 percent.

"right" importance in the Georgia tax structure, i.e., is it too dominant or is there room to substitute higher sales tax collection for lower property and income taxes. In this section, we present results of analysis of these three questions. We also evaluate the revenue implications of the recent legislation eliminating food from the base, and the potential revenue effects of the addition of services to the base.

Revenue-Income Elasticity

Sales tax revenue growth since 1980 has been robust (Table 17). Real revenue generated by the sales tax grew by 77 percent between 1980 and 1995. Since real personal income over this same period grew by only 67 percent, we can say that sales tax revenue more than kept pace.[19] However, some of this growth was due to changes in the tax laws (including that resulting from a rate increase in 1989), and the growth was dampened by the first step in phasing in the food exemption in 1996. The question the policy analyst must ask is how the *automatic* growth in sales tax revenues matched up against the growth in the Georgia economy over this period. We would like to know (based on historical performance) how much revenue to expect from the present sales tax structure if there are no discretionary rate and base changes in the future.

The measure most often used to index revenue growth against growth in the economy is the revenue-income elasticity. This index is the simple ratio of the percent change in sales tax revenues to the percent change in personal income. For example, an elasticity of 1.0 means that revenue is expected to grow at the same rate as income, an elasticity of less than unity means that the expected

[19] In real per capita terms, the sales tax base grew by more than $2,500 between 1966 and 1995, i.e., the average Georgian paid tax on $2,500 more in inflation-adjusted purchases in 1995 than in 1966.

sales tax revenue growth is less than that in the economy, etc. We use historical data to estimate the elasticity for Georgia in two different ways, as described in Box 3.[20]

Box 3 Defining Revenue Elasticity

The revenue elasticity with respect to income is the expected percentage change in revenue that accompanies a one percent change in income. If the estimated elasticity is one, the revenue source grows at the same rate as income. If the estimated value is greater (less than) one, the revenue source grows faster (slower) than income.

Sales tax elasticity estimates are usually based on the assumption that sales tax revenue and income are related by an equation such as

$$R_t = A I_t^{\epsilon} u_t$$

where R_t is revenue, I_t is income and u_t is the unobserved error term, all at time t. The constant, A, and the elasticity coefficient, ϵ, are estimated by ordinary least squares regression.

There are two problems with this method. First, double logarithm functional forms have the convenient property of a constant elasticity, but this may not fit the reality of the true historical pattern in revenue growth. Second, this simple estimation ignores potential revenue impacts from price changes, changes in population and economic structure, and changes in the tax structure that cannot be "cleared" from the data series.

An alternative measure of revenue elasticity has been estimated by Hawkins (1996) in a study of the Georgia sales tax. This measure is obtained from estimates of the determinants of household demand in the United States, including the effects of income, prices and demographic variables. Results from both the traditional measure and the Hawkins measure are reported in this paper.

There are many reasons why the state needs to understand the elasticity of its tax system. The most important is to plan for necessary changes. If the revenue generated by the present system is not adequate to support public expenditures, then either a downward expenditure adjustment or a change in tax structure is necessary. Second, an analysis of the determinants of the growth pattern of the sales tax can give us some information about how the tax could be changed to provide for

[20] All sales tax collections from motor fuel purchases have been removed from these data series. We have excluded both Georgia's second motor fuel tax and the additional 1 percent of motor fuel taxes that the state considers a general revenue source.

more adequate built-in growth. Finally, it is necessary to know the elasticity of the tax for purposes of revenue forecasting.

Following the traditional elasticity approach, we have estimated the relationship between taxable sales to income. The estimate is developed after adjustment for rate increases but without controlling for any other changes in the economy. The results of this ordinary least squares regression analysis give an income elasticity estimate for Georgia of 0.79, well less than unity for the period 1980 to 1995 (Table 18). This means that the sales tax base grew 21 percent more slowly than the economy during this period.[21] The robust growth of sales tax revenue in Table 17, therefore, was primarily due to the increase in the rate from 3 to 4 percent, and not to natural growth in the sales tax base.

Before concluding from this result that a fundamental problem exists with the Georgia sales tax, we must consider the possibility that this approach to estimating the elasticity is flawed. The traditional approach suffers from the weakness that it considers only income growth as a determinant of the growth in sales tax revenues. Surely other factors play a role. For example, the price of goods that are subject to taxation may rise relative to those that are exempt, and this might cause consumers to buy more nontaxable goods; or the age distribution may change and the different spending preferences of the elderly may show up in less taxable consumption; or the mix of inputs purchased by business may shift between taxable and non-taxable categories. The elasticity of the sales tax is really the weighted sum of the elasticities of all of the components of sales taxation, and surely the elasticity of these components (food, automobiles, etc.) are all very different.

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[21] Mikesell (1992) estimated an elasticity of 0.87 for Georgia using the traditional method, but for an earlier period.

In a recent study, Hawkins (1996) has taken such factors into consideration in estimating the income elasticity for state government sales tax collections from household spending on taxable commodities. From this study, the income elasticity for current collections in Georgia is estimated to be 0.87, i.e., sales tax *collections* in Georgia grow at about 87 percent of the rate of growth in the economy. The estimate is higher than that obtained using the traditional method, but still well less than unity. There are good explanations for the difference in results obtained by the Hawkins method (0.87) and the traditional method (0.79). The first is that spending patterns have changed and households in 1996 spend their income in different ways than they did in the 1970's. The traditional method does not capture such changes. Another explanation for the difference is that the Hawkins methodology controls for changes in prices and adjusts for changes in the age distribution.[22]

Is a sales tax elasticity of less than unity, 0.87 in this case, a "bad" result? There are two schools of thought here. One is that an elasticity of at least unity is needed to support expenditure growth in line with real growth in the economy. Many believe that the demand for public services rises in proportion to personal income, and therefore an inelastic tax structure guarantees budget problems. If the revenue elasticity does not meet demand, it will be necessary for legislators to return regularly to the voters to ask for discretionary rate or base increases, or to pare down the level of public spending. The other school of thought is that elasticities *greater than one* are not good precisely because politicians can receive an automatic tax increase without offering it as a proposition to the voters. Moreover, one might question whether public expenditures should grow

[22] The primary disadvantage of the Hawkins estimate is that it does not take direct account of changes in taxable business purchases. These purchases are a sizable share of total collections (as discussed below), but little evidence exists about how they change in a changing Georgia economy. Another problem is that he assumes (as do most analysts) that one can adjust the taxable base data for discretionary rate changes by dividing actual collections by the current statutory rate. This does not account fully for the displacement of taxable consumption.

in step with personal income. In recent years, Georgia seems to have had the best of both worlds -- a low sales tax elasticity but enough economic growth and enough elasticity from the income tax to buoy the aggregate budget.

There is no reason why the elasticity of *every* tax in the system needs to be unity. The *target* may well be only an *aggregate* elasticity of unity. If we accept the latter rule, then a low sales tax elasticity must be offset by a commensurately higher elasticity of some other tax. Edwards and Wallace (1995) have estimated the current elasticity for the Georgia individual income tax to be 1.36. Their estimate means that, as a state revenue source, the income tax can support faster growth in public expenditures. The implication is that as the Georgia economy grows, there will be a "natural shift" from sales to income taxes.

It also appears that the elasticity of the Georgia sales tax is lower than that in several other states. Mikesell (1992) estimated the revenue elasticity for Georgia and sixteen other states between 1970 and 1991. The results of his study, summarized in Table 19, show a range of sales tax elasticity estimates, with respect to income, between 0.84 to 1.22. After re-constructing the standard errors for Mikesell's estimates, we find strong evidence that these differences are not due to a random variation. For example, the estimates for Arizona, Arkansas, Georgia, Mississippi, Minnesota, New York and Virginia are all significantly less than one while those for Connecticut, Massachusetts and Hawaii are significantly greater than one. The causes of the interstate elasticity differences, however, are not directly addressed by Mikesell. Most economists believe that both exemption policies and the economic structure of a state can influence the growth of the sales tax base.

Apart from the issue of the revenue-income elasticity, we might raise the following question: Have revenues from the general sales tax grown rapidly enough to cover population growth and price

inflation in the Georgia economy? To answer this question, we have calculated and graphed the trend in real per capita value of the sales tax base (see Figure 1). A horizontal line beginning at the 1966 level would mean that revenues grew by only enough to cover inflation and population growth, but no more. As may be seen from the figure, there has been a substantial increase in the real per capita level of the sales tax base during this period, i.e., taxable sales in Georgia have outgrown the combined effects of population increase and inflation. By this criteria, we could conclude that over the past 25 years, the general sales tax has been an adequate revenue source.

Cyclical Stability

Sales tax collections can deviate substantially from their long-run growth path. These deviations are of great significance to state fiscal planners. States may not run deficits, hence large revenue shortfalls in a given year -- even in the face of bright long-run economic prospects -- can lead to unpleasant expenditure adjustments.

Short-run fluctuations in sales tax revenue have been significant in Georgia. To illustrate the degree of these fluctuations, we have constructed Figure 2 in the following way: First, we have estimated the growth path of revenues that would have been "predicted" for the sales tax, based on its 1966-1995 historical performance. From this predicted amount of revenue, we subtract the actual revenue yield from the sales tax, and this *difference* is plotted on the vertical axis in Figure 2 for the period since 1990. A value of 0.0 (the two lines coincide) would mean that predicted revenue and actual revenue are the same. As may be seen from the figure, the gap was considerable in 1992: actual revenues were $230 million less than long run performance would have predicted. In other words, sales tax revenues were off by a factor of 8 percent from historical trend. This is a significant

revenue swing, and one that requires significant policy adjustments on the part of effected governments. For the 1990-1994 period, the sales tax was well off its historical trend, and did not recover until the 1994-1996 period.

The business cycle is not the only source of instability in the flow of sales tax revenue, and all instability is not adverse. The impact of the Olympics is a case in point. We estimate that the direct impact of the Olympics on sales tax revenues was a positive fluctuation of about 2 percent of total state and local government revenues from the sales tax (Box 4).[23] It is important that state fiscal planners have a good understanding of what causes these fluctuations. The most important reason is to better plan for covering shortfalls or spending windfalls. Some government expenditures are postponable until better times, and some states build up "rainy day" funds during periods of prosperity. Another reason is to restructure the tax system to mitigate against cyclical effects. Most observers believe that the source of cyclical instability is durable purchases especially automobiles and spending related to new housing. However, much of this is hypothesis, and the causes of the sales tax revenue cycle have not been fully established. In an empirical study, Fox and Campbell (1984) found support for the durable spending hypothesis for Tennessee. Dye and McGuire (1991 and 1992) also found support for the argument that some categories of consumer spending vary more widely than others over the cycle. However, a specific examination of spending on automobiles (Hawkins (1996)) did not find strong support for the "durables" argument in Georgia.

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[23] There are three reasons for the relatively small estimate. First, total state sales tax revenue is more than $3.5 billion and even a "big event" will have a relatively small percentage impact. The Georgia Department of Revenue (1996b) reported an increase of 11.1 percent for July 1996 over July 1997 and this monthly gain is a fairly small part of total annual collections. Second, the exemption of many services in Georgia, e.g. long distance telephone call charges and parking fees paid by visitors, reduced the impact of Olympics-related spending. Finally, as described in the Box, many Georgians left the state during the games.

A related hypothesis about the source of cyclical stability in sales tax revenues is business spending, i.e., one would expect business purchases to be particularly cyclically sensitive. Since Georgia may derive as much as one-third of sales tax revenues directly from businesses, this could be responsible for a significant part of the variation in total revenue. In particular, construction materials are taxable in Georgia and account for sizable collections, and it is clear that construction expenditures vary significantly over the business cycle.

Box 4 Estimating the Impact of The Olympics on State and Local Government Sales Tax Collections

The 1996 Summer Olympic games created a large inflow of visitors and economic activity and had a stimulative impact on sales tax collections. One can think of three revenue effects. The first is an increase in local revenue from use tax collections on Olympic construction activities. A second is from increased numbers of visitors to Atlanta, and other parts of Georgia, for the games and the periods immediately before and after the games. Third, many residents of Atlanta left the city for all or part of the games, decreasing regular taxable spending.

One can clearly see the first effect in the accompanying table. In calendar years 1991-1993, Fulton County Local Option Sales Tax (LOST) collections did not increase as rapidly as statewide collections. In fiscal 1994, 1995, and 1996 (what we take to be "the Olympic period"), the growth in local collections exceeded the growth in state collections. If all of the growth differential -- between the Fulton County LOST and Georgia state collections -- is attributed to Olympic activity, governments in Fulton County would have grossed an additional $5.9 million before the games began (through July 1, 1996). Marta would have also collected an additional $5.9 million.

To measure the net effect of the second and third sources of Olympic revenue variation, one must turn to monthly collections. Preliminary data for 1996 indicate that collections began to increase noticeably in March 1996 and this increase continued through September. For July, August and September, collections were up 34 percent over the same three month period for the previous year. Not surprisingly, the data indicate that visitors outspent the loss of Atlanta resident revenue. Attributing 100 percent of this net increase to the Olympics and expecting no additional Olympics related dollars after September 1, 1996, means the increase will be about $12 million for fiscal 1997. Thus, to local governments in Fulton County, we find a three-year total of $17.9 million ($5.9 million from pre-Olympic activity and $12 million from additional spending during, and immediately after, the Olympics) to be a reasonable estimate. For Marta, the sales tax revenue estimate is also $17.9 million over the same three years.

The impact on state collections can be calculated from these estimates. If county collections increased by $17.9 million, one would expect the 4 percent state sales tax to raise an additional $71.6 million. A second revenue effect, however, is from increased collections statewide to the extent the Olympics increased economic activity throughout the state. We are unable to make such an estimate . Our best estimates, then, are an increase equivalent to about 12 percent of 1996 collections for Fulton County local governments and 2 percent for the state of Georgia.

Box 4 Estimating the Impact of The Olympics on State and Local Government Sales Tax Collections (Continued)

Sales Tax Collections,
Georgia and Fulton County: 1990-1996
(in millions of dollars)

Year	State Collections	Growth Rate	Fulton County Collections	Growth Rate
1990	2,740		36.2	
1991	2,771	1.1	36.6	1.0
1992	2,792	0.8	36.2	-1.0
1993	3,088	10.6	40.1	10.6
1994	3,375	9.3	44.6	11.2
1995	3,645	8.0	48.7	9.3
1996	3,951	8.4	53.3	9.5

Sources: Fulton County Department of Finance, unpublished data, and Georgia Department of Revenue (1997 and earlier years).

One cause of at least a portion of sales tax fluctuations in Georgia is changing prices. Hawkins (1996) found that changes in the price of services and other non-taxable commodities have a strong impact on tax revenue. If the relative price of non-taxable consumption falls (rises), consumers are drawn away from (towards) taxable items.[24] Of course the revenue implications of these substitution effects disappear when all household spending is taxed.

It is possible to quantify the instability of the sales tax by collection category, using a data series maintained by the Georgia Department of Revenue. When vendors remit sales tax collections, the returns are grouped by the Department in one of the following: services, furniture, utilities, food, lumber, apparel, manufacturing, general merchandise, automotive and "miscellaneous". The

[24] If service providers increase prices when the economy is expanding and reduce prices in a recession, the price changes can induce a revenue cycle.

historical income elasticity of collection from each of these classes was estimated (Hawkins, 1996), and a mean square error was calculated for each commodity type (Table 20). The mean square error reported in the far right column of the table is a measure of the variation of actual collections around the collections level predicted by the long run growth pattern (see Box 5). In effect, it is an index of the degree to which the pattern of revenues actually realized "fit" the prediction of revenues based on historical performance. The greater the index number (the mean square error), the greater the instability.

The largest mean squared error estimates are associated with the utilities, lumber, apparel and the miscellaneous categories. i.e., consumption levels in these sectors are less stable than in the other commodity classes. Total automotive spending is relatively stable but the results for the utilities and lumber categories are consistent with the hypothesis that business-to-business transactions are a major source of cyclical instability. Without more detailed information on these collections, however, one cannot conclude that business-to-business purchases are the primary cause of short-run fluctuations in Georgia sales tax revenues.

Box 5 Mean Squared Error

The income elasticity measure is an estimate of the long run revenue response to changes in income. For any particular year, however, the actual revenue response to a change in income, and the estimated "average" response can be quite different. To measure the severity of these deviations, we use the mean squared error for the estimation procedure, or,

$$MSE = \frac{\sum_{t=0}^{T} [R_t - \hat{R}_t]^2}{T}$$

which is simply actual revenue minus predicted revenue, squared and averaged over every observation. The average of the squared margins of error is an index of how much short run deviation exists for a particular sales tax category. The larger the mean squared error, the greater the instability.

Food and Services

Two important revenue performance issues for Georgia are the effects of exempting food for home consumption and the effects of taxing the purchases of currently exempt, non-housing services.[25] The advantages and disadvantages of these two policy changes are taken up in more detail in Section VI below. Here, we examine the revenue yield effects and the cyclical stability implications of exempting food and including (non-housing) services in the sales tax base.

In fiscal 1995, we estimate that the retail sales tax on food for home consumption grossed approximately $467 million in sales tax revenue for the state (Table 21, row 1). This total represented about 12.8 percent of the state's gross sales tax revenue. This is the minimum revenue loss to the state that would have resulted from the exemption of food, had this action been taken in 1995. It is a minimum because in exempting food, the state will be reducing the price of food for home consumption relative to the prices of other goods in Georgia. If households react in the normal way to this change in relative prices, spending on "home" food should increase, and spending on other (taxable) items could possibly decline, causing a further loss in revenue. Our estimates are that the price elasticity of food for home consumption expenditures is -1.14.[26] The price elasticity for expenditures on other taxable commodities was found to be 0.65. With these responses, the spending behavior adjustment to the tax base with a complete food exemption is -$78.8 million

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[25] The exclusion of housing services from this analysis is based on the current policy of taxing construction materials. According to the Federation of Tax Administrators (1993), nine states fully tax construction contracts. Georgia considers the contractor to be the final user of all materials, and is therefore liable for use tax, but the labor component of new housing is exempt. Extending the retail sales tax to this construction labor is possible but we do not consider it here.

[26] With this estimate, a 1 percent decrease in the price of groceries (holding the price of food in restaurants constant) would increase food in the grocery store spending by 1.14 percent (Hawkins, 1996).

(Table 21, row 2). The total revenue loss from exempting food in 1995, therefore, would have been on the order of $545 million or 14.9 percent of retail sales tax revenues.

The revenue potential of including (non-housing) service consumption in the sales tax base is also presented in Table 21.[27] Since the source for these data is the National Income and Product Accounts -- adjusted according to Georgia's share of total personal income -- we must clarify the fact that these data represent service purchases by households and not service purchases by firms. The question we ask is this: What would be the revenue implications of adding presently exempt services to the sales tax base? Specifically, we consider extending the retail sales tax to the following categories:[28]

- Clothing repair and cleaning,
- Barbershops and beauty parlors,
- Water and sanitation services,
- Telephone and telegraph services,
- Domestic services,
- Medical care,
- Personal business services,
- Taxicab services, insurance services,

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[27] We follow Dye and McGuire (1989) and estimate revenue impact from the National Income and Product Accounts. We use this "top down" approach to estimating Georgia consumption, as opposed to a "bottom up" approach using the Consumer Expenditure Survey, for two reasons. First, the National Income and Product Accounts are consistent with the Consumer Expenditure Survey. Second, time series data are readily available according to Standard Industrial Classifications. We use the Consumer Expenditure Survey data in the vertical equity analyses below.

[28] The services total also includes estimates of the labor share of automobile and electronic repairs. This share is derived from the 1992 *Census of Services*. Georgia currently taxes parts for repair and exempts labor when the two are separately stated in the bill.

- Clubs and fraternal organization memberships, and
- Higher education services.

For fiscal 1995, we estimate that an extension of the Georgia sales tax to all (non-housing) services would have netted $1.5 billion in additional state sales tax revenue. It would have increased the existing Georgia sales tax base by 44.3 percent. This estimate includes an $18.2 million adjustment based on expected consumer behavior. Viewed another way, if the state sales tax base retained food and was expanded to include all services, a 2.8 percent sales tax rate could have yielded the same 1995 revenue total.

Changes in the coverage of the base of the sales tax also effects the long run elasticity and the cyclical stability of the tax. A point that is frequently missed in tax reforms is that changes in the tax structure today can have significant effects on the growth pattern tomorrow. One concern that might be raised about the sales tax is that it is not growing as fast as the Georgia economy, and that discretionary changes might be called for in the future. Hawkins (1996) has estimated the effects on the elasticity and the stability of the sales tax in the event the tax base were broadened or narrowed in specified ways. The following summarizes the results of his analysis:

1. Prior to the food exemption legislation, our best estimate was that the revenue-income elasticity of the Georgia sales tax was 0.87, i.e., a 10 percent increase in Georgia personal income would lead to an 8.7 percent increase in revenue.

2. The food exemption will actually increase the elasticity, to about unity for the state government sales tax. So, the exemption of food is a mixed blessing. By the time all food for home consumption is out of the sales tax base, the revenue from the sales tax will grow about as fast as income. The cost of this, however, will be a loss of nearly 20 percent of revenues. It will take decades before revenue positive "elasticity effect" will offset the revenue from the negative "exemption effect".

3. The inclusion of all presently non-taxable services (coupled with a food exemption) would increase the revenue-income elasticity to 1.17, i.e., under a broad based sales

tax, a 10 percent increase in Georgia personal income would lead to an increase of 11.7 percent in sales tax revenues. This finding underlines the major problem with the growth in revenue from the Georgia sales tax, the exemption of services.

A higher elasticity does give more growth to the sales tax, but if it comes from a new exemption, in particular the food exemption, the price is a less stable pattern of revenue yield. In fact, we would expect that exempting food purchased for home consumption will make the sales tax more vulnerable to the business cycle. Our estimates are consistent with this instability (Table 22). For example, the ratio of the mean squared error for a Georgia tax base where all food consumption is exempt (5.61), to the actual Georgia tax base (4.26), is 1.32. [29] Thus exempting food introduces 32 percent more variation in revenue yield, relative to a sales tax base where all food is taxed. Including services in the sales tax base would decrease the variability of revenue flow. This stability follows from a tax base that covers virtually all non-food consumption.

Reliance on the Sales Tax

Does Georgia rely too heavily on the sales tax? If the practice in other states can be taken as some kind of norm, then Georgia would not appear to be dramatically out of line with either the southeast region or the United States. On a per capita basis, Georgia's state and local governments collected $578 in sales tax in 1993. This was lower than Tennessee and Florida, but above the United States average (Table 23). If we adjust sales tax collections for income differences, by computing sales taxes as a share of personal income, the results are much the same (Table 24). The sales tax accounted for 3.1 percent of personal income in Georgia, again above the national average

[29] Mean squared error estimates for the food and services categories are also reported in Table 20. The exact values of the mean squared estimates are not easy to interpret, but the magnitudes reveal the relative stability of revenues collected from each category of consumption.

but well below that in Tennessee (4 percent) and Florida (3.5 percent). Part of this burden is the inclusion of food and residential electricity (and natural gas) purchases in the Georgia base. The recently passed exemption for grocery purchases should reduce this burden.

Within the Georgia region, and across the United States, state and local governments divide sales tax revenues in very different ways. Georgia allocates about one-fourth of total sales tax revenues to local governments (Table 23). This is well less than Alabama's 38.7 percent, but above the United States average. South Carolina and Florida allocate less then 10 percent.

It appears that public opinion is the most likely determinant of the variation in sales tax reliance. Sometimes this is shaped by considerations such as elasticity, real per capita revenue growth, burdens and cyclical variation, and sometimes it is shaped by perception and emotions. Whatever the reasons, based on the results of the 1997 referendum for local sales taxes, the sentiment in Georgia would seem to be in the direction of a greater reliance on sales taxation. Heavy state reliance by Florida and Tennessee reflects distaste for the personal income tax in these states. Heavy local reliance in Alabama is a consequence of sales tax reliance by city governments and reduces the property tax millage within these cities.

V. WHO PAYS THE GEORGIA SALES TAX?

Who pays the Georgia sales tax? Is there truth in the old saw that sales taxes burden poor families disproportionately more? Are families in "similar" circumstances treated the same, or are there biases against families with particular consumption patterns? For example, are large families

disproportionately burdened because the purchase of tangible goods is more heavily taxed than the purchase of services?

These are the questions addressed in this chapter. We present estimates of the distribution of sales tax burdens for households of different sizes and with different levels of income, and estimate changes in the distribution of tax burdens that would result from including services and exempting food.

Vertical Equity

The vertical dimension of equity in taxation usually refers to the tax treatment of families with different incomes. While there is no hard and fast rule about what is "equitable", most would agree that regressivity is not a proper goal for a state tax system. Yet the single most pronounced criticism of the sales tax is that it imposes a heavier burden on the poor than on the rich. [30]

Some of the best students of sales taxation now question the majority opinion that sales taxes are highly regressive. They argue that the traditional approach to estimation of sales tax burdens uses an improper measure of income -- one that understates the true income of poorer families by a greater extent and therefore overstates their relative level of sales tax burdens.[31] They argue that the use of a permanent income measure would remove this bias and show the distribution of sales

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[30] If the effective sales tax rate (taxes paid as a percent of income) declines when household income increases, the tax is said to be *regressive*. If the effective sales tax rate increases with income, the tax is *progressive*. When the effective tax rate is constant across all levels of income, the distribution of burdens is said to be *proportional*.

[31] See, for example, Fox (1996).

tax burdens to be proportional. The traditionalists hold to the conclusion that the normal measure of income is appropriate and that empirical estimates of a regressive sales tax are valid.[32]

In this analysis of the Georgia sales tax, we estimate the distribution of burdens using both the traditional approach (which uses reported income as the measure of well-being) and the permanent income approach (which uses total expenditures as the measure of well-being). For both analyses, the data used are taken from the United States Bureau of Labor Statistics' *Consumer Expenditure Survey*. This survey is the best source of data on household spending information in the United States.

Estimates: The Traditional Approach

Following the traditional incidence model, effective tax rates have been calculated for Georgia families at various income levels. Details regarding the calculation can be found in Appendix C. The calculations follow the traditional sales tax incidence model in which the tax is assumed to be shifted forward to the consumer. In other words, firms do not alter the "shelf-price" of a commodity when a sales tax is levied. We also ignore any price effects that might result from pyramiding of the sales tax paid on business inputs. Further, we assume that none of the general sales tax is paid by out-of-state residents.

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[32] The traditional approach measures ability to pay with reported income of the household for the previous year. Pechman (1985) gives perhaps the best and most detailed treatment of this approach and his vertical equity study concludes that the typical state sales tax structure is regressive.

The results of this analysis are presented in Table 25. The households are grouped by income decile and the income brackets appear in the first column. According to these data, the richest 10 percent of Georgia families have an average income of nearly $92,000 and poorest 10 percent have an average income less than $1,500. The income measure, as reported in the *Consumer Expenditure Survey*, is "money income before taxes". This measure includes wages and salaries, self-employment income, Social Security and private and government retirement receipts, investment income and transfer payments (including gifts received by the household). The decile groupings for Georgia were developed by Maguire (1996) based on State of Georgia income tax return data.

The second column is our estimate of the sales tax liability of a household, based on the Georgia sales tax structure and an estimate of the consumption spending patterns of the households. We estimate, for example, that a household with an income of $23,245, will pay $395 in sales tax (column 2) which is equivalent to about 1.7 percent of its income (column 4). These results show that average sales tax liability increases with income. The lowest decile averaged above $190 in state sales tax while the highest income decile averaged $888. In general, the richest Georgians pay nearly 5 times more in sales taxes than do the poorest Georgians. As a share of income, however, the average sales tax liability falls when income increases, from about 13.3 percent of household income for the poorest households to 1.0 percent for households that earn more than $66,141. The decline in the effective tax rate supports the conclusion that the Georgia sales tax is severely regressive. Higher income households face an effective tax rate that is markedly less than that of

lower income households. The degree of sales tax regressivity is greatest among families with incomes below the poverty level.

The results in Table 25 also illustrate the reasons for skepticism about the conclusions drawn from the traditional analysis. For the lowest income decile, the estimates hold that the effective sales tax rate for a 4 percent statutory sales tax rate is estimated to be 13 percent. If this estimate is accurate, these households are consuming far more than they earn or receive from others. While it is possible for household spending to be greater than income for a short period of time, it is not feasible for the average household in any income class to repeatedly spend more than it earns.

Estimates: The Permanent Income Approach

A likely explanation for the strange results at the lowest income levels (reported in Table 25) is that *true* income is underestimated with the traditional approach. Households that are experiencing a temporary income decline (or a negative income shock) may constitute a large share of the households in the lowest decile.[33] If the average household that reports income of less than $2617 is wealthier in a lifetime income sense, reported annual income is not a good measure of the well-being for that household.

One solution to this problem, put forth by Poterba (1989 and 1991), Metcalf (1992) and Casperson and Metcalf (1993), is to use total consumption as the measure of a household's well-

[33] A recent editorial in the *Atlanta Journal Constitution*, written in the afterglow of the local sales tax adoption by 63 counties, describes the popular sentiment exactly. "The dirty secret of some of the erosion of support for public schools in recent years has been the tide of apartment construction. An influx of renters' children can change the character of a school overnight. Renters may pay school taxes indirectly, but they don't have to fork over that four digit check every autumn." (Williams, 1997, p. A-12).

being. The rationale behind this approach is that income fluctuates in the short run but total household consumption provides accurate information about the household's expected lifetime earnings. Many have argued that this proxy for lifetime income is a superior measure of taxpaying capacity.

Other economists are unconvinced by the claim that consumption is the best available measure of taxpaying capacity, and offer strong criticisms. In a recent review, Auten (1996) wrote that, "While annual income has obvious deficiencies as a measure of ability to pay, the use of consumption expenditures is also deficient. For example, it does not account for the economic power that may be associated with accumulated wealth." Clearly, a household's investment income reflects the size of accumulated wealth, but household consumption spending may or may not.

Following the permanent income approach, households may be grouped by their *expenditure* level, as in Table 26. The assumptions behind the construction of this table are described in Appendix D. This approach shows a relatively narrow gap in consumption expenditure between wealthy households and poorer households in Georgia. The wealthiest spend, on average, slightly less than $58,000 while the poorest spend slightly less than $5,800. The disparity in household income, as described in Table 25, was much greater: $91,922 and $1,487 respectively.

The variation in effective sales tax rates across the classes is also more narrow. The poorest households have an average effective tax rate of about 2.9 percent while the wealthiest have an average rate of 2.1 percent. The conclusion still holds that the sales tax is regressive, but the degree of regressivity is of a much lesser order under these permanent income calculations. This is more than a subtle difference. Suppose one believes that the *overall* state tax system should not be regressive. This implies that regressive sales taxes must somehow be offset by progressive income

taxes. The results from the permanent income approach to estimating sales tax regressivity suggest that a much less progressive income tax is required to achieve the state's equity goals.

Who Pays the Sales Tax?

From this analysis of the vertical equity of the Georgia sales tax, we can draw some stylized conclusions.

- The sales tax is regressive.
- According to the traditional estimation approach, it is sharply regressive, with most of the vertical equity problems coming for families with incomes below the poverty line (Figure 3).
- According to the permanent income approach, the distribution of sales tax burdens is only mildly regressive.
- Higher income people pay most of the sales tax. By these estimates, the top 50 percent of income earners pay 70.5 percent of the sales tax; and the top decile pays about 21 percent.
- About 30 percent of Georgia families earn less than $11,000 and these families pay about 14.5 percent of the state sales tax. Depending on which estimation method is believed, the sales tax absorbs between 2.5 and 4.5 percent of the income of these families.
- If the Georgia sales tax were converted to a strictly proportional tax on all income, the average effective rate would be about 1.8 percent for all families and the top 50 percent of income earners would pay 84 percent of the tax.

The conclusion that the sales tax in Georgia is regressive is not surprising. Studies in other states have reached a similar conclusion. Some recent vertical equity estimates for the sales tax in specific states include KPMG Peat Marwick/Policy Economics Group (Iowa (1993) and Connecticut (1991)), an Ohio study by Fox (1996) and a Minnesota study by the state Department of Revenue (1995). These studies differ slightly in the definition of the income but each finds

similar pattern of sales tax regressivity.[34] Despite the exemption of food for home consumption (groceries) in all of these states, the sales tax is still found to be regressive.

Two qualifiers about these vertical equity conclusions are in order. First, these estimates do not include local government sales taxes. If low income households are more likely to live (and spend) in a low rate county, the estimates overstate the degree of regressivity. Second, we have assumed that sales taxes are fully shifted to consumers in the form of higher prices. To the extent this is not the case (and most analysts believe it is not), the estimates presented above probably overstate the degree of regressivity.

Horizontal Equity

The other half of the equity evaluation of the Georgia sales tax is its 'horizontal' dimension, i.e., whether similarly situated households are treated the same under this tax. Fairness in taxation would seem to demand horizontal equity. But while the alleged regressivity of the sales tax is the issue that has drawn the most attention, horizontal inequity may be far the greater flaw. Fox (1994), sums it up nicely "... exemptions and exclusions violate horizontal equity and make the tax less fair, though other goals may be met (with the exemptions)." A pure consumption tax is fair in that it would tax all consumption, but the general state sales tax deviates wildly from a tax on consumption: exclusion of mail order purchases, purchases with food stamps, purchases of

[34] The Connecticut study used a slightly different methodology. For this study, indirect sales tax burdens were included according to the estimated tax liability paid on inputs into the final products. The use of indirect sales tax burdens did not materially change the regressivity conclusion.

prescription drugs, and expenditures on many services are all examples of the exceptions which lead to horizontal inequity of the sales tax.

The measurement of horizontal equity is no easy matter, because it requires that we identify a "similarly situated household" as a reference point. In the analysis below we take the position that the effective tax rate should not vary by family size. If a family of size one pays 1.9 percent of income in sales taxes, then fairness requires that a family of size five should face the same burden. The point is that a sales tax is not horizontally equitable if it includes goods typically purchased by large families but excludes those goods more typically purchased by small families.

The calculations used here to test for horizontal equity follow much the same approach that was used to examine vertical equity. In this case, however, our interest is whether the effective tax rates are different for different family sizes. One limitation with this type of calculation is that the estimates are not a "pure" measure of inequity. For example, the vertical equity calculation ignores the number of wage earners in each household and this characteristic is clearly correlated with income. Our family size effective tax rate is not a pure measure of horizontal inequity income and other characteristics also vary across family size.

From the results of this analysis, it would appear that the Georgia sales tax discriminates against larger households. Using traditional income as the measure of household well-being (Table 27), we find that larger households face a greater sales tax burden. For example, households with six or more members pay 22 percent more, as a share of household income, than households with

two members.[35] To be more precise, we find that an average family of size 2 pays 1.68 percent of income in sales tax while an average family of size 6 pays 2.05 percent.

We might ask why this bias exists. The answer seems clear. The sales tax base includes commodities which we would expect to weigh heavily in the consumption basket for larger families, and it excludes many services which may be consumed disproportionally by smaller families. Some evidence on this can be drawn from the Consumer Expenditure Survey. Households with five or more members spend more, as a share of household income, on several commodity classes: including transportation, food at home and apparel. Surprisingly, these households spend slightly less on health care (about 4.1 percent of income as compared to 4.4 percent for all households).

Should larger households pay more? One could argue that on average, larger households use more publicly provided goods and services and their tax burden should reflect this use. Conversely, one could argue that larger households have less capacity to pay taxes than do smaller households, all else being the same. The state income tax (and the federal income tax) offer additional exemptions for larger households to account for this diminished ability to pay taxes. It would seem poor policy to take one side on this issue in forming income tax policy and the other side in forming sales tax policy.

An obvious question is whether the new food exemption will improve horizontal equity in Georgia. The data in Table 28 indicate that horizontal equity by family size will improve. Without the exemption, the effective tax rate (ETR) for the largest households is 22 percent more than the

[35] Using expenditures as the measure of well-being, we get essentially the same result: slightly higher sales tax liabilities for larger households.

ETR for households with two members. With a full grocery exemption, larger households pay only 11 percent more.

VI. POLICY DIRECTIONS FOR THE GEORGIA SALES TAX

Nationally, the sales tax is in a period of transition, and this transition has generated discussion over "best policy". Technicians and policy analysts generally push to broaden the tax base and lower the tax rate, while elected officials resist bringing new consumption categories into the tax base and seem willing to accept higher tax rates. Further complicating things, there is no objective way to pass judgement about which is the best route to a good tax structure, i.e. whether economic or political criteria should dominate.

Georgia faces the same set of choices as other states: keep the tax rate low or maintain a broader list of exemptions. A policy analysis as this cannot come to a conclusion about a one true path, but it can lay out the advantages and disadvantages of alternative future reforms. We consider three issues:

1. The merits of expanding the sales tax base to include services.
2. The merits of extending the food exemption to all local government sales taxes.
3. The merits of a higher sales tax rate.

The Taxation of Services

Over the past two decades, consumption patterns have changed dramatically in Georgia and in the United States. The shift in consumption towards services is described in Figure 4. Currently,

non-housing services account for more than 40 percent of household consumption. Conversely, the share of consumption reached by the Georgia sales tax (including the consumption of durable goods) has decreased, and state revenues have fallen off commensurately. For example, in 1974, the average family spent 41 cents of every dollar on the consumption of non-durable goods. In 1994, this share was down to about 30 cents. If a tax base narrows over time, the only ways to maintain revenue are to expand the tax base or increase the tax rate -- two tax reform strategies that Georgia has been loathe to follow.

Even with some evidence that an erosion of the sales tax base has taken place, and with the inevitable result of some combination of higher income taxes, higher sales taxes or slower expenditure growth, many still oppose the taxation of services. One of the reasons for this opposition is self interest -- certain groups are unwilling to give up their tax advantage. In other cases, the reasons are more defensible on objective grounds. In yet other cases, policy makers and voters are uncomfortable with the taxation of services because it is "new". The sections below review the arguments for and against expanding the sales tax base to include services.

Arguments Against Taxing Services

Services Are More Difficult to Site. The Minnesota Commissioner of Revenue wrote the following about taxing services, "The most significant arguments against taxing business services arise when the benefits of the services are not clearly consumed within a single state or when administrative concerns arise."[36]

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[36] James (1992), p. 74.

While the retail sales tax on goods is imperfect, revenue is generally collected and remitted where the merchant is located. Situs questions can be settled by locating the good and assuming the benefits of the good are derived in that location. Mail order purchases and "border shopping" present problems for states, and commercial enclaves present problems for counties. But, by and large, the public seems comfortable with the assumption of a correspondence between where the location of a consumer purchase and where she benefits from the government expenditure of her sales tax payments. Services, however, are seen as more complex multi-state transactions with multi-state benefits. Determining which state has the authority to tax the transaction can be time-consuming, and fraught with legal problems. If the taxing unit is a county government, this problem becomes even larger.

Taxation of Services Is Unfair to Georgia Businesses. One class of services, called "business services" by the United States Office of Management and Budget, would raise special problems if subjected to sales taxation. Such services are purchased as business inputs but are not a physical component of output. Examples include advertising, consulting and computer programming services. The problem is this: If a manufacturer must pay sales tax on the purchase of a computer for accounting purposes, one expects the price of the manufactured product to reflect the tax as the producer passes forward his costs, including any taxes paid in the production process. If the final purchase of the good is subject to the ordinary sales tax, the consumer will have been double-taxed.[37] Tax pyramiding can be unfair to customers, can harm the competitive position of Georgia producers, and can make the tax system less transparent as additional taxes are hidden in the price

[37] If the final output is not taxed, the pyramiding problem is less of a concern for in-state consumption.

of the output. The potential for pyramiding is clearly a disadvantage of the extension of the Georgia sales tax to business services.

A tax on business purchases of services can also discriminate among producers. First, service inputs are used unevenly by producers and tax burdens would vary according to the input mix. Second, vertical integration also varies unevenly across producers, and the service tax burden would reflect this difference. For example, firms that choose to hire their own accountants and lawyers would face a lower tax liability. A tax structure that favors one method of doing business over another violates the neutrality maxim of good tax policy and makes the Georgia economy less efficient.

Finally the taxation of business inputs could be especially detrimental to border areas. For example, the Augusta, Chattanooga and Columbus metropolitan areas are only partially located in Georgia. According to the Federation of Tax Administrators (1994), Alabama, South Carolina and Tennessee each tax 6 of 34 business services while Georgia taxes only 2 of 34 business services. With this structure, some Georgia firms clearly enjoy an advantage. Taking away this advantage would create a less favorable environment for firms located in Georgia and might reduce the possibility of "border shopping" from neighboring states.

The Audit Costs for Including Services Is Relatively High. The inclusion of services in the sales tax base raises some especially difficult audit problems, and likely will increase the cost of administration. Part of the difficulty is simply the increased number of taxable objects and enterprises. This is an expected consequence of tax base expansion and not a problem unique to services. However, two types of audit problems are specific to services.

First, the exemption of material inputs actually serves a "self-policing" administrative function. According to Due and Mikesell, "The primary force guaranteeing that firms do register (with the sales tax authority) is their inability to buy tax-free under a registration number unless they comply."[38] For example, automobile repair shops register in order to purchase automobile parts tax-free. After registering, the repair service provider must state taxable parts separately from exempt labor on the invoice or face a sales tax liability on the entire transaction. Due and Mikesell report that authorities in Texas and Washington State have discovered lower voluntary sales tax registration rates among service providers. These providers cannot purchase many items tax-free *and* choose not to register. Thus, the inclusion of services in the Georgia tax base, if service providers could not enjoy tax-exempt purchases, could reduce voluntary compliance and raise the cost to the state of registering and auditing such firms.

A second audit problem arises because services are often performed in the informal sector, by individuals or small businesses who may have neither a license nor a permanent location. An attempt to get providers of child-care or swimming pool cleaning services, for example, to voluntarily register with the Georgia Department of Revenue could be very difficult.

Personal Services Do Not Provide Substantial Revenue Yield. The consumption of personal services have been the most popular expansion of the sales tax base in other states. Rentals and entertainment services appear to have been the first wave of service taxation. Recent tax studies in other states point to a likely second wave, identifying personal services as the prime exemption area

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[38] Due and Mikesell (1994), p. 139.

for consideration.[39] Connecticut and Florida are but two examples of states that have recently added several services types of personal services to their tax base.[40]

However, the addition of personal services in the sales tax base will probably disappoint policy-makers who are looking for significant amounts of new revenue. Sales tax experts have long predicted this. Dye and McGuire (1991) found the consumption of personal services to be a relatively small yield. Furthermore, personal services were a slow growth component of consumption from 1968-1987.

Arguments For Taxing Services

Unfairness. A tax system should not reward someone who prefers consuming services over someone who prefers consuming goods. One might say that an ideal sales tax is one that imposes the same tax on all final consumption. The Georgia sales tax falls well short of this norm. Under the current policy, the consumption choices made by a household determine that household's liability. If the members of the household are relatively heavy service consumers, the household faces a lower tax burden. This is, plain and simple, a major unfairness in the Georgia tax system, and one that is most difficult to justify. The illustration in Box 6 highlights the potential for inequitable and arbitrary treatment.

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[39] See Ebel (1990), Fox (1996), Ladd and Weist (1991) and Minnesota Tax Study Commission (1986).

[40] Federation of Tax Administrators (1994).

Box 6 Illustrations of Unfairness in the Georgia Sales Tax Treatment of Services

EVENT	THE ROBINSON FAMILY IS NOT TAXED ON	THE ADAMS FAMILY IS TAXED ON
Improving Personal Appearance	A nose job, or new front teeth caps	A new wardrobe of luxury clothing
Spending a Windfall Inheritance	Hiring an Architect to redesign the house	Buying a new car
Income Tax Preparation	Hiring an accountant to prepare the tax return	Buying software to do it themselves
Death	Paying a lawyer to handle Grandma's will	The cost of Grandma's casket
Entertainment	Cable TV movie	Video tape rental
Recreation	A sports club membership	Season ticket to the Braves Games
The Family Business	Hiring a telephone answering service	Buying an answering machine
Romance	Junior's membership in a dating service	Junior's purchase of flowers for his date
Planning for Retirement	Subscription to investment analysis on the internet or a visit with an investment planner.	Purchasing a book on how to invest.
A Regular Dinner	Whole wheat flour, Italian tomatoes, portabello mushrooms and goat's milk cheese.	Using a coupon for home pizza delivery.
A Special Occasion	Live lobster and fresh caviar from the local market.	A hot dog at the ballpark.

In fact, the pattern of service consumption across households may be partially responsible for the effective tax rate inequity in Table 27. Recall that larger households were found to have a higher tax burden. Nationally, these households have been found to purchase less health care and other services.

The Exemption of Services Opens the Door for Tax Avoidance. Rational taxpayers will take advantage of provisions in the law that would allow them to reduce tax liabilities. When goods are taxed and services are not, the door is opened for such arbitrage. A blur in the distinction between taxable goods and exempt services has appeared in several taxpayer disputes in Georgia's neighboring states. For example, an Alabama photographer considered his profession to be photographic services rather than the sale of photographs. This photographer collected sales tax on separate charges for photographs, but did not collect on photographic services, rush charges, search fees, stock fees, typesetting and mosaic fees.[41] In *Thigpen Photography v. Department of Revenue*, a judge ruled that stock fees, rush charges, typesetting and mosaic charges are all taxable but actual photographic service labor is exempt. In Tennessee, a portable toilet service provider claimed charges for the service were exempt.[42] The state countered that customers were renting a piece of personal property and this rental was taxable in Tennessee. The central issue became whether the transaction involved enough on-site labor, by the owner, for the operation of the toilet to be considered a service.

These are cases where tax administrators may understand the distinction between taxable transactions and exempt transactions but the public finds this distinction arbitrary and uneven. If the same carpenter can take the same wood and nails and repair a cabinet, create a cabinet, or install a cabinet fixture (exempt, taxable and exempt if one is keeping score in Georgia), why can't Georgia treat these transactions identically?

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[41] *State Tax Notes*. (September 1995).

[42] *State Tax Notes*. (July 1995).

Revenue Yield. Estimates of potential revenue collections from including services in the tax base (presented in Table 29), were made by the Sales Tax Subcommittee of the Joint Revenue Structure Commission. Services may be classified in three groups: A, B and C.[43] The A group primarily includes personal service and exempt telecommunications (a full description can be found in Table 31). This group was considered to be the most politically feasible for taxation, but was estimated to raise only about $197 million or an additional 5.8 percent of sales tax revenue in 1994.[44] Group B included garbage collection, construction and several professional services, and was estimated to raise about $163 million in 1994, or 4.8 percent of total revenue. The third group, Group C, contained a wide variety of business and professional services, including health care. This group would be a source of considerable revenue, more than $771 million (23 percent of total sales tax revenue) in 1994, but was considered to be the least politically feasible of the exempt services. The removal of certain statutory exemptions (portions of Appendix B) would bring an additional $88 million or about 2.6 percent of total sales tax revenue. If all four of these groups were brought into the sales tax base, the state rate could have been reduced from 4 percent to 2.94 percent, a 27 percent tax cut.

The Sales Tax Base Would Grow More Rapidly. Between 1987 and 1992, total receipts by service firms in Georgia grew by 65.2 percent.[45] From fiscal years 1988 to 1993, the Georgia sales

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[43] Georgia Revenue Structure Commission (1995).

[44] Since these estimates are for a portion of both consumer services and business services, we are not able to use the Hawkins (1996) method for estimating consumer (elasticity) responses for these services.

[45] United States Bureau of Census (1994a), p. GA-16. This total does not include Finance, Insurance and Real Estate firms. A separate Census addresses activity in these sectors, but unfortunately, that Census was not conducted at the state level before 1992.

tax base grew from $64.7 billion to $77.2 billion, or a 19.3 percent increase. Clearly, the tax base would have grown faster if most services in the Georgia economy had not been exempt.

In fact, the 1992 *Census of Service Industries* reports that receipts of personal service providers in Georgia grew by 38.6 percent, over the same 1987 to 1992 period, or roughly twice the rate of the existing Georgia sales tax base.[46] Total personal income over the same period grew by 37.7 percent. Therefore, expenditures on all services grew faster than the Georgia economy, expenditures on personal services grew at the same rate as the Georgia economy and the sales tax base grew more slowly than the Georgia economy.[47] These data suggest that Dye and McGuire's (1991) finding of the relatively slow growth of personal service expenditures in the United States does not hold for the Georgia economy in recent years.

We have not specifically examined why personal services in Georgia grew faster than our expectations from the findings of Dye and McGuire. Two likely causes for robust growth in Georgia personal services are the rapid urbanization within the state over the time period and the increase in dual income households, from inter-state migration as well as new entrants into the workforce.

A Reduced Excess Burden. The exemption of services from the sales tax base creates an excess burden for Georgia consumers. [48] Because services are taxed less than goods, consumers purchase fewer goods and more services than they would in the absence of the tax. Economic theory

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[46] United States Bureau of Census (1994a), p. GA-16.

[47] As mentioned above, the recession of 1991 and 1992 are the primary reasons that the sales tax base did not grow as rapidly as personal income over that period.

[48] The 'excess burden' of a tax is the additional costs that arise when tax policies cause resources to be misallocated. So, we may say that the imposition of a sales tax with exemptions generates a *burden* (the amount of tax paid) and an *excess burden.*

tells us that this excess burden is related to the size of the change in behavior. If the sales tax induces a consumer to increase spending on services and reduce spending. In most Georgia counties, goods are taxed at six percent while most services are untaxed. A six percent price difference should be enough to elicit some consumer response.

There are two possibilities for eliminating this excess burden, i.e., for removing the price distortion. One is to abolish the sales tax -- if no consumption is taxed, there will be no excess burden. This option is not feasible for Georgia. The other possibility is to tax all consumption at the same rate, i.e., to bring services fully into the tax base and to lower the tax rate on goods. The excess burden consideration would lead most analysts to prefer a 2.9 percent state sales tax on all consumption to a 4 percent sales tax on the present base.

The Regressivity of the Sales Tax Can Be Lessened. The addition of selected services to the sales tax base allows a state to improve the vertical equity of its sales tax. Legal services, for example, were found by Bohm and Craig (1987) to be progressive through the middle and upper income levels, but regressive at the lower income levels. Other services, however, including medical service expenditures, were regressive through all income levels.

The Georgia model developed for this study was used to examine the regressivity implications of a sales tax on services in Georgia. These estimates (Table 31) indicate that a comprehensive tax on (non-housing) service consumption would be regressive in Georgia, but slightly less regressive than the existing Georgia sales tax base.[49] For example, a household that earns $20,000 currently pays 2.3 percent of income in sales taxes while a household earning more

[49] For this comparison, we include food for home consumption in the sales tax base.

than $67,000 pays 1.2 percent (Table 25). This ratio, of the poor family effective tax rate to the wealthy family effective tax rate, is approximately 1.95. For a tax on services, the $20,000 a year household will pay 0.9 percent while the wealthy household will pay 0.5 percent (Table 31). This ratio is approximately 1.89. For all but the lowest income households, the ratio of effective tax rate for the income class to the effective tax rate of the wealthiest income class declines. Therefore, we conclude that the regressivity of the Georgia sales tax would be no worse under a tax on all consumption and, depending on particular service exemptions, could improve.

Georgia Taxes Fewer Services Than Do Others States. States often follow the example set by other states, in order to avoid getting "out of line". The Federation of Tax Administrators (1994) found that Georgia taxed thirty-five of a possible one hundred and sixty-four services. The average number of services taxed by states who used a sales tax was fifty-six. Georgia could significantly broaden the state sales tax base and not get out of line with the policy of other states. Moreover, the experience of these other revenue authorities with the problems listed above would assist the Georgia Department of Revenue in developing a smooth transition.

New Telecommunications Technology Requires It.[50] Advances in telecommunications bring new revenue challenges to state and local policy makers in Georgia. The largest challenge is the erosion of the sales tax base through new telecommunications services and easier household access to providers of goods who do not have a Georgia location and do not collect Georgia sales taxes.[51]

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[50] For a more full treatment of the telecommunications issue in Georgia, See McHugh (1996).

[51] *State Tax Notes*, (January 6, 1997).

Georgia currently taxes any telephone and cellular charges which are not intrastate or interstate long distance service. Enhanced telephone services, e.g. caller ID and call forwarding, are taxed. However, paging services and Internet access services are exempt. As to entertainment products now available for computer downloading, Georgia taxes the purchase of pre-packaged software and pre-packaged music and video. Monthly charges for cable television are taxable in Georgia but pay-per-view entertainment in exempt. Overall, one must conclude that Georgia treats these categories of service consumption in a very uneven way.

Telecommunications service providers have the ability to exploit the Georgia tax base with new services. If Georgia taxes cellular charges and exempts beeper charges, a telecommunications service provider could bundle the two services and adjust the total price so as to decrease the tax liability. If Georgia requires the exchange of a computer disk to occur for a software transaction to be taxable, telecommunications service providers can arrange for faster digital transfers, of the exact same information, where the transaction is exempt. Telecommunications service providers are not part of an exemption conspiracy -- customers enjoy using these services from their homes -- but if a change in the structure of a transaction includes a 6 percent reduction in the price to the consumer, firms will exploit the uneven treatment of telecommunication services in Georgia. The state can only prevent this behavior with a sales tax base that is broad with respect to telecommunications.

Simultaneously, retailers have the ability to use telecommunications in order to further exploit *Quill v. North Dakota*. As mentioned above, Georgia cannot require a firm that does not have a presence in the state to collect sales taxes. According to Newnan (1996), this is a reason why large mail-order companies locate in smaller states which do not represent a large share of the

market. Alternately, the company could locate in Alaska, Delaware, Montana, New Hampshire or Oregon and take advantage the zero state sales rate in these locations. From any of these locations, a retailer can use the Internet to narrow the gap between a catalog sale and a sale in a retail store.

We examined the retail use of the World Wide Web (an Internet service) by one large computer retailer. At first glance, the Internet Shopping Network resembles a computer product catalog. However, some important differences exist. First, with the Internet, prices and available quantities are continuously updated. Second, independent product reviews, such as a comparison of 5 printers under $500 from *PC Magazine*, are available for customers to use in decision making. Third, the consumer can request a search of the full catalog for precise product criteria. The same information exchange that takes place in a retail location, but is difficult to facilitate with a catalog, is clearly an advantage of the new telecommunications technology as well.

One might ask whether Georgia has any legal options with respect to retailers under the *Quill* ruling. This issue is a source of debate but many people believe that the local Internet access provider is also selling the Internet Shopping Network products.[52] The local access provider is offering a medium for information and ultimately product exchange, security for credit card information exchange and the ability for consumers to order products from third-party retailers. As a majority of retailers simply collect sales taxes on products they offer, and do not produce, why can't the Internet service provider collect the tax on the product ordered through the World Wide Web?

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[52] *State Tax Notes*, Jan. 6, 1997, pp. 41-47.

The Exemption of Food

The phase out of the Georgia state sales tax on food for home consumption began in 1996 and will continue through 1998. Local option sales taxes will continue to apply to food for home consumption purchases (commonly called "groceries") but new local option taxes will not. All special local option sales taxes (SPLOST) will apply to grocery purchases. When a local SPLOST expires, or a new local SPLOST is initiated, this tax will also apply to grocery purchases. Moreover, an amendment passed in November 1996 allows the imposition of an additional one percent sales tax by school districts, and food is specifically included in the tax base. Therefore, grocery purchases in Georgia can carry as much as three percent sales tax depending on the sales tax choices made by the county. At some point in the not-to-distant future, the question of the treatment of food under local sales taxes should be revisited. Some will argue that the exemption should be extended, and others will argue that it should not. Either way, it would seem useful to review the advantages and disadvantages of taxing groceries.

Arguments Against Taxing Food

"A good prince will tax as lightly as possible those commodities which are used by the poorest members of society: e.g., grain, bread, beer, wine, clothing and all other staples without which human life could not exist." Erasmus (Norton, 1968), p. 217.

Regressivity. Perhaps the loudest argument against applying the sales tax to food for home consumption is that these purchases increase the regressivity of the tax.[53] That is, analysts allege

[53] Due and Mikesell (1994).

that low income families spend a greater proportion of their income on grocery purchases, hence they bear a disproportionally larger sales tax burden on food.

To the extent the regressivity argument is valid, it relates only to the lowest income classes. Data from the *Consumer Expenditure Survey* and the Georgia sales tax model (reported above) are used in Table 32 to illustrate this point. Families in the lowest income decile pay an estimated 5.1 percent of their income in sales taxes on food (column 4), if we assume an annual income measure is appropriate and if we assume that low income families do not use food stamps. If we estimate this burden after taking into account the use of (non-taxable) food stamps (right column of Table 32), the estimated effective rate is 2.4 percent. These effective tax rates fall as income increases. For example, households with an annual income between $15,216 and $20,110 pay sales tax on food equivalent in amount to around 0.6 percent of their income, whereas families with an income greater than $66,142 pay about 0.2 percent.

If food were exempt, the sales tax liability of families would *fall* by the amounts shown in the right panel of Table 32. Since the effective tax rate of higher income people will fall by a smaller amount, the sales tax will become less regressive. The figures in the penultimate column show the absolute amount of sales tax relief for each income class, should food be exempt. A household with an income in excess of $66,000 would pay $187 per year less in sales tax, whereas a bottom decile family would pay only $34 less.

A Tax On Children. The share of total expenditures used for grocery purchases increases with family size. Therefore, families pay a higher effective tax rate than single headed households, and having more children increases a household's tax liability further. The differences are especially great for very large families. If a family size is six or more, the estimated average sales

tax liability is $208 (Table 33). For a family with two members, it is only $114. More bothersome, according to those who advocate removing food from the sales tax base, is that the effective rate of taxation (total sales taxes paid as a percent of total income) increases with family size. According to the estimates presented in Table 33, the increase is from 0.35 percent for a two person household to 0.58 percent for a family of six. Note that the average income of two person and six person families only differs by about 10 percent.

The Widespread Use Of Computers Has Reduced Compliance Costs. One traditional argument against the exemption of food for home consumption is the increased compliance costs of merchants who sell both groceries and other taxable products. This argument still carries some weight (see below) but it is less relevant today than it was even 5 years ago. The use of scanners and Uniform Product Codes (UPC) has greatly improved the ability of grocery stores to distinguish among different types of commodities.[54] This system allows merchants to easily determine the tax status of an item. Even hot, prepared food, which can be sold in grocery stores but is rarely exempt in the states that exempt groceries, can be packaged with a UPC code and automatically taxed.

Twenty-five States Exempt Food For Home Consumption. Since the depression era beginnings of the sales tax, California and Ohio have exempted food for home consumption.[55] From 1971 to 1994, the exemption became popular, and the number of states exempting home food purchases increased from fifteen to twenty-five. The trend continues. A food for home consumption

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[54] Officials in California estimate that more than 70 percent of grocery sales in the state are through scanners and computers (Due and Mikesell (1994), p. 79).

[55] Due and Mikesell (1994).

exemption was considered in North Carolina (Lemov (1996)), in Alabama House Bill 865/Senate Bill 690 (Ely and Madison (1996)), in an Arkansas bill to initiate an amendment to the state Constitution (Mikesell (1996)) and in an announcement by the Governor of Missouri before the 1997 legislative session (*State Tax Notes*, (November 16, 1996)). The entire northeastern and west coast regions currently exempt food and only North Carolina has ever reversed a food exemption once enacted. Whatever the drawbacks to this policy, states seem to have coped. There is some comfort in joining the mainstream, and clearly the direction in tax policy is toward the exemption of food.

Revenue From Grocery Purchases Is A Slow Growing Revenue Source. Dye and McGuire (1991 and 1992) examined the growth performance of several classes of consumption during the 1968-1987 period. Food for home consumption had the slowest growth rate over the period. There are many reasons for this finding: the low income elasticity of food consumption, the higher income elasticity of eating out, and the somewhat lower increase in grocery prices vs some other goods and services.[56] Since food consumption grows relatively slowly, revenue from a sales tax with a food exemption might actually grow at a faster *rate*.[57] As noted above, we estimate that the revenue-income elasticity of the Georgia sales tax would increase from 0.87 to 1.00 if food for home consumption were omitted from the sales tax base.

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[56] From 1970 to 1995, the price of food increased by 393 percent. The composite commodity Consumer Price Index, which includes food, increased by 379 percent (United States Bureau of Labor Statistics (1996)). This relatively slow price growth for food accounts for some of the slow expenditure growth.

[57] In fact, Dye and McGuire find that a food exemption raises the sales tax growth path by a greater margin than a policy to include personal services in the tax base. Our findings for Georgia are not consistent with the result.

Is this an advantage on the food exemption? Certainly a sales tax without food in the base will always yield less revenue than a tax with food in the base. But those who would exempt food can take comfort in the fact that they have thrown out a component whose share of total consumption is declining.[58]

Eliminating Food Is Politically Correct. In most states, the mid 1990's have been a time of tax reduction.[59] "Politically correct" tax reductions would have two features. First, the relief would be perceived as fair by most of the population. Second, the relief would be extended to a broad base of the population, i.e., it would maximize the number of voters receiving relief.

The first criteria has to do with perceptions of fairness, and here the food exemption stands up well. Many voters and interest groups see a tax on food as "wrong".[60] It inordinately burdens the poor and families with children, and many believe that food is a necessity that is simply not a proper subject for taxation. Clearly, in Georgia, the removal of the sales tax on food was a popular political action.

The second criteria is met in that the entire state population benefits from this exemption. Few alternative tax reduction measures can match this advantage. Income tax rate cuts and exemption increases do not reach the significant share of the population that is outside the income

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[58] With zero inflation and income growth of 2.7 percent per year, the tax base without food is projected to also grow at 2.7 percent per year. A tax base which includes food should grow at only 2.3 percent per year. Under this very simple growth assumption, additional revenue growth of 0.4 percent per year takes many years to eliminate the $545 million revenue loss from the food exemption.

[59] Lemov, Penelope (1996). "The Tastiest Tax Cut" *Governing*, November, pp. 29-30.

[60] According to Due and Fairchild (1988), Nebraska legislators argued that a tax on food was "immoral" (pp. 3-23).

tax net. Property tax rate rollbacks or increased homestead exemption may not unburden renters. "Circuit breaker" property tax relief may catch renters, but low income families may not choose to file for the relief. Most taxpayers do not perceive business taxes as burdening them. A sales tax rate reduction, and perhaps a gasoline tax rate reduction, are the only measures that might compete well on the coverage condition.

Arguments for Taxing Food

"... food exemption is perhaps the largest mistake the states have made in their sales tax revenue structures, costing substantial revenue, adding administrative and compliance problems, and deviating from the basic rule of uniformity of treatment of all consumption expenditures." Due and Mikesell, p. 79.

Exempting Food Costs the State Sizable Revenue. Georgia raised approximately $467 million from the state sales tax on food for home consumption in fiscal year 1994. Decreasing the state sales tax rate on food by 2 percent in fiscal year 1997 and one percent in each of the next two fiscal years, will require the state to either raise other taxes or decrease expenditures by a total of $1.14 billion over the four year period (Table 34). For the state's 1995 population -- more than 7.2 million people -- this amounts to about $158 per Georgian.

The 1996 sales tax reduction was undertaken at a time when the revenue position of the state was strong, and the hard choice among expenditure reductions was avoided. But, this will not always be the case. A time will come when the state will need to make up these revenues, and it will be forced to raise the sales tax rate, increase other taxes or reduce expenditures. Advocates of keeping food in the sales tax base will argue that this should have been taken into account during the 1996 legislative session.

The Regressivity Argument Is Not Convincing. Those who propose to keep food in the sales tax base claim that the regressivity argument is overblown and inappropriate. First, the poorest of the poor already receive some relief from the sales tax on food since by federal law, food stamp purchases are not subject to state and local sales taxes. We estimate that approximately 95,000 Georgia households already face significant reductions in their sales tax on food purchases.[61]

Food stamp benefits are greatest for the poorest 10 percent of all households in Georgia (Table 32). The benefits also extend to the second poorest 10 percent. Above these groups, a minimal number of households receive food stamps. This shows that a food stamp exemption has a feature that a full grocery exemption lacks -- with the food-stamp exemption, low-income households receive at least partial tax relief while high-income households do not receive any relief.

One also can observe from Table 32 that the full grocery exemption reduces tax burdens to the wealthiest households in Georgia by an estimated $187 a year. The *average* household earns about $21,945 and receives an estimated $115 in relief, or 39 percent less than the highest income. Therefore, the attempt to improve vertical equity in the tax structure requires unintentional tax breaks for the wealthy. If fact, of the projected revenue cost of $207 million in fiscal 1997, only 13 percent of the relief goes to the poorest 20 percent of the households in Georgia while 29 percent goes to the wealthiest 20 percent (see Figure 5). If vertical equity is the largest problem with the tax structure in Georgia, then surely a $60 million tax cut for the wealthiest one-fifth of Georgia families is not the most efficient solution.

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[61] Food stamp benefits vary with both income and family size. For a benefit schedule, see Georgia Department of Human Resources (1994). See also Hawkins (1996).

Second, one might pose the question whether the vertical equity of every individual tax is an important policy consideration. Surely, the relevant issue is the distribution of burdens resulting from the entire tax system.[62] That some elements of the system are regressive and others are progressive, is irrelevant. If the tax system is unfairly burdensome on the poor, why should corrective efforts be focused on one regressive component of the sales tax base? We note that every motor vehicle operator pays the same license fee, set by the state, regardless of income and the amount one drives. This "driving tax" is probably the most regressive existing tax in the United States.[63] Yet policy-makers realize that if another tax, the state personal income tax for example, is sufficiently progressive and raises adequate revenue, the regressivity of the driver's license fee is relatively unimportant. One could make a similar argument for the treatment of food in Georgia in 1996.[64]

Those who would advocate leaving food in the sales tax base would argue that a better route would have been to study the income, property and sales taxes together; and to choose an overall tax structure that gives the desired distribution of the tax burden in Georgia. The alternative distributional tax measures (to exempting food) include the following:

- Introduce a refundable income tax credit for low income families to offset the sales tax paid on food,
- Raise the floor level for payment of the state individual income tax, and

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[62] According to a Citizens for Tax Justice (1996) comparison of the tax systems in all 50 states, Georgia has a tax system that is "typically regressive."

[63] Since every driver pays exactly the same amount, regardless of whether they drive, the driver's license fee should not be considered a user charge.

[64] Arguments in favor of an income tax credit for low income families, in lieu of a food exemption, can be found in Fox (1996), Due and Mikesell (1994), Ebel (1990) and Ladd and Weist (1991). Gold (1992, p. 166) argues that the public does not understand the relative advantages of a food tax credit and a better informed public could greatly reduce the number of state tax exemptions.

- Give an across-the-board reduction in the state sales tax rate.

The first two of these measures would target relief on lower income families only. The second measure gives the greatest benefits to the working poor; households who earn relatively little but incur Georgia income tax liability. The third possibility every household with greater benefits to the poor, in terms of effective tax rate, and minimal administration and compliance costs.

The Excess Burden Of The Sales Tax Would Be Less. Consumers are thought to be better off if their consumption choices are not affected by government policy. When tax-induced price changes affect behavior, as in the case of a tax on one good but not on another, then economists see the result as an *excess burden* of consumers.[65] A sales tax which applies to non-food purchases, but not to food, introduces such an excess burden. Consumers are considered to be induced, by government policy, to consume less of the taxed commodities (e.g., restaurant food) and more non-taxed commodities (food for home consumption). In short, consumers pay the sales tax on their taxable consumption, but they incur the *excess* burden when they are induced to choose a bundle of goods which is different from their desired consumption package by the uneven tax differentials.

Is excess burden a real issue in Georgia? Will consumers really be driven away from their most desired consumption? The answer lies in whether one believes that the tax changes can induce significant changes in consumption behavior. The price differential between a home-cooked meal and a restaurant meal could increase by 7 percent if all local sales taxes exempted food, and by more if a future tax increase is required. The resulting change in behavior could indeed be significant.

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[65] A good review of the excess burden of a tax can be found in Rosen (1994, pp. 306-328).

Compliance And Administrative Costs Do Exist.[66] While automation in the retail food industry eases the exemption of grocery purchases, merchants will incur some compliance costs. As with any tax revenue source, penalties exist for incorrect exemptions of non-grocery items in grocery stores. A merchant's best insurance against these penalties is the creation and operation of costly internal accounting procedures in order to verify compliance. According to Pomp (1986), a second form of insurance is to tax an item when the merchant is uncertain of the tax status. This incorrect application of state rules and regulations will not necessarily be caught by the tax-paying public and will weaken the legislated tax relief.

A second compliance problem is the unequal distribution of the compliance cost. Smaller, older grocery stores often don't use scanners or other automated inventory systems. These stores face higher compliance costs, per dollar of revenue, relative to large chains. The exemption of some, but not all, of their products puts them at a competitive disadvantage and treats them unfairly relative to larger, automated grocery chains.

State administration costs will also rise. With a new, sizable exemption, vendors want additional information about the tax status of specific items. This effort required by the Department of Revenue, however, is costly and generates little additional revenue for the state. In Georgia, Department staff that previously worked on assessment and audit issues must now spend more time determining which products are exempt (i.e., food for home consumption) and which products are taxable.

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[66] See also Appendix A.

In other states, these new food-exemption rules and regulations have not improved the logic of the tax-relief policy. The tax practitioner literature has identified several problem areas in clarifying a food exemption. The first problem area is in determining the distinction between exempt food items and taxable food items. California and New York have wrestled with snack food; policy-makers generally disapprove of an exemption for snack food but it is difficult to draw a line between food and snack food.[67] In Georgia, an attempt to distinguish between food staples and luxury food commodities contributed to a successful legal challenge of a limited food exemption in 1989.

A second problem area is determining when eligible food should be considered "for home consumption." If the food is intended for on-premise consumption, a food exemption generally does not apply. For example, if a consumer purchases doughnuts in a sealed box, they can be considered for home consumption. If they are handed to the customer on a plate, with a fork, they can be considered a meal away from home and taxed. Unfortunately, one cannot ask the consumer about their intent. It is reasonable to assume that customers would not volunteer a tax liability, and revenue authorities must find reasonable rules for determining which doughnut purchases should be exempt. However, reason can be difficult to find in the tax practitioner literature. In California, one ruling involved whether produce used at the San Francisco Zoo should be exempt.[68] Pets are generally not given the same food exemption as humans and this taxpayer appeal revolved around

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[67] In Minnesota, honey covered peanuts are taxable (candy is generally taxable) but honey roasted peanuts are exempt. Another exemption policy distinguishes between prepared drinks such as Hi-C and powdered drinks like Kool-Aid. Only the latter are exempt (*Sales & Use Tax Alert* (1996)).

[68] Wood (1995).

a tax liability, for produce delivered to the zoo, when the same produce is exempt when purchased in a California grocery store. Further complicating the appeal was a California state exemption for livestock feed

From a press release on November 13, 1996, the Georgia Department of Revenue appears to decide the off-premise question according to the type of vendor rather than the nature of the transaction. In Box 7, we have quoted extensively from the Department's guide for vendors. Vendors in Georgia who do not accept food stamps and for whom staples account for less than 50 percent of total sales must document that exempt food was ordered for off-premise consumption (in which case, the transaction is exempt). Other vendors in Georgia can simply assume the transaction was off-premise consumption (as long as the food is not kept warm and is packaged for travel) and are not required to document any exemptions granted at the cash register.

Box 7 Excerpts from "How to Comply with the New State Sales Tax Reduction on Eligible Food and Beverages"

The purpose of the change in the state sales tax law is to exempt from state sales tax food purchased to be taken home, prepared, and eaten. The general rule is that eligible food, sold to be eaten off premises, qualifies for the reduced tax rate. Food sold to be eaten on premises is not exempt. The regulations which implement the new law are patterned after the regulations controlling the use of food stamps. Therefore, Georgia's regulations center on the type of food being sold, and where the food is consumed.

It is the responsibility of the retailer to determine whether or not an item qualifies for the reduced state tax rate. The determination is a simple two-step process. First, does the item qualify as eligible food? Then, if it does, where will it be eaten?

Eligible food is any food item which could be purchased with federal food stamps. This includes most food items sold in grocery stores with the exception of alcohol and tobacco products. Food Stamps may not be used to purchase food which is hot at the point of sale. Therefore, food which is cooked on premises and kept warm will not be exempt. For example, many grocery stores sell hot roasted chicken from a rotisserie. The chicken would not be considered eligible for the exemption.

Box 7 Excerpts from "How to Comply with the New State Sales Tax Reduction on Eligible Food and Beverages" (continued)

The food must be sold for off-premises consumption. Food sold in grocery stores to be eaten in the store does not qualify for the exemption. Food, such as ice cream or soft drinks, sold in open containers, or through vending machines, does not qualify for the exemption.

The Department of Revenue has classified food retailers into three categories. The first category is food retailers which accept food stamps. The second category is food retailers which do not accept food stamps, but whose sales of eligible foods comprises at least 50% staple items. The third category is for all other retailers, including retailers which also serve the food on premises.

Retailers in the first category (those which accept food stamps) should notice little difference in their operation. If the food item can be purchased with food stamps, then it qualifies for the reduced tax rate. If the food cannot be purchased with food stamps, then it does not qualify for the reduced tax rate. The retailer will have to keep separate records of eligible and ineligible food sales, but all sales of eligible foods will be presumed to be for off-premises consumption.

Retailers in the second category (those which do not accept food stamps) will be subject to one additional record keeping responsibility. They must show that 50% of their eligible food sales comprise staple products. Briefly, foods that are staples include meats, breads, cereals, vegetables, and dairy products. Once the retailer shows that 50% of eligible sales consist of staple products, then all eligible sales [as identified by the retailer] will be presumed to be for off-premises consumption.

Retailers in the third category, especially those with facilities for eating on premises, whose mix of eligible food sales do not fit into the second category, will have the burden of maintaining records to show that a sale was for off-premises consumption. The Department of Revenue will presume that the sale was for on-premises consumption, and thus subject to the full tax, unless the retailer can provide records to the contrary [i.e. an item sold "to go"].

As an example, a grocery store sale of a dozen donuts will be presumed to be for off-premises consumption. A convenience store sale of a dozen donuts will likewise be presumed to be for off-premises consumption, but only if 50% of the store's eligible sales consist of staple products. A donut shop sale of a dozen donuts will be presumed to be for on-premises consumption unless the retailer keeps records indicating that the sale was for off-premises consumption.

Source: Georgia Department of Revenue (1996).

There are three implications regarding this Georgia policy. First, vendors who accept food stamps or meet the staples criteria are granted lower exemption compliance costs by the Georgia Department of Revenue. Second, these vendors have an incentive to assume that every doughnut (or any other qualified product) is for home use since documentation will not be required. Third, depending on the level of customer information, vendors who are required to document exempt sales could find that ignoring the food exemption in Georgia is the best strategy.

Food For Home Consumption Is A Stable Revenue Source. Since States cannot run budget deficits, and since they provide essential services, it is essential that revenue be relatively stable over the business cycle. Dye and McGuire (1991) examined the growth and stability of several classes of consumption across the business cycles between 1968 and 1987 period. Food for home consumption was the most stable of the consumption classes examined. Dye and McGuire found that including food in the sales tax base makes revenue growth more stable.

It is important to remember that unlike revenue elasticity, total sales tax stability is not an average of tax base component stability. Rather, a broad tax base should be more stable because consumers have fewer opportunities to substitute between taxed and non-taxed consumption.[69]

Implications For Local Governments. Local governments receive approximately 13 percent of their total sales tax revenue from grocery purchases. The current food exemption phase-in allows

[69] In a study of revenue performance, Hawkins (1996) found that a sales tax with a food exemption and a services exemption is more price sensitive than a tax with no exemptions or a tax with either exemption (but not both).

existing local taxes to continue the application to food but new local sales taxes will exempt food.[70] This policy creates a haphazard pattern to sales taxation in grocery stores in Georgia.

- The state will not tax food. Prepared food and non-food purchases in grocery stores will remain taxed.
- Existing local option sales taxes will include all food purchases. If the local tax does not expire, food remains taxed. The one percent sales tax to partially fund MARTA will continue to apply on food purchases.
- New local option sales taxes will not include food.
- Special local option sales taxes will include food, but expire after 5 years and if re-instated, will exempt food.
- A constitutional amendment, passed in November, 1996, allows for a new 1 percent sales tax for educational purposes, but specifically prescribes that food be included in the base of this new tax.

The result is that food purchases will ultimately be taxed at 0, 1, 2 or 3 percent while other purchases in grocery stores will be taxed at 4, 5, 6 or 7 percent. This rate structure complicates compliance, erodes some of the benefits of the food exemption and raises fundamental questions about the objectives of the Georgia sales tax system.

An Increase In The Georgia State Sales Tax Rate

A possible scenario for Georgia is that the food exemption will be extended to all local governments, that there will be resistance to an expansion of the sales tax base to services, and consequently a "sales tax revenue gap" will arise. In this case, an increase in the state and/or local

[70] Different tax bases for state and local sales taxes are unusual but do exist. In Louisiana, for example, the state sales tax did not apply to grocery purchases (before the exemption expired in 1996) but local sales taxes did apply.

sales tax rate might be considered. In fact, most states have gradually raised their rate as revenue needs have arisen, because many see this as a policy path of least resistance. Others would argue that base broadening is a better route. The case for and against the rate increase option is reviewed in the following sections.

Arguments Against A Rate Increase

Horizontal Inequity And Excess Burden. An increase in the sales tax rate magnifies all of the existing distortions and inequities in the sales tax. If a household prefers to consume services or prefers to purchase food for home consumption, the value of that preferential sales tax treatment is now greater. There are two implications of further preferential treatment. The first is that some of the revenue gain from the rate increase will be dissipated as consumers are induced to switch from taxable to non-taxable goods. Second, the overall welfare of Georgians is reduced because the greater deferential in the price of taxable and non-taxable goods drives consumers further from their most preferred consumption package.

Regressivity. The data in Figure 6 show the effect on vertical equity of a Georgia sales tax without food at a 5 percent rate and a 4 percent sales tax with food included in the tax base. The difference between the bars demonstrates that a higher rate more than reclaims the advantages at the food exemption. The difference is worse for lower income households, i.e., the regressivity is more pronounced.

Border Competition. Three Metropolitan Statistical Areas -- Augusta, Chattanooga and Columbus -- are partially located in Georgia. At present, one can argue that the flow of business, in both directions, has reached an equilibrium. An increase in the sales tax rate would add a new

price advantage for out-of-state vendors. The result could be a loss in business for Georgia border vendors.

The Cost Of Doing Business. Perhaps the biggest drawback of the rate increase option is that it could harm the competitive position of Georgia businesses. About one-third of the tax is collected directly from business in significant part due to the purchase of business inputs. One might speculate that such an increase could have an economic development effect. Some analysts have argued that sales tax rate differentials are part of a firm's location decision and that an increase in the rate could hurt Georgia's attractiveness.[71]

Local Governments Do Not Benefit. Raising the state tax rate would provide no direct revenue benefit to local governments. Arguably, local governments will suffer both from a slower growth in a sales tax base that does not include services; and from the revenue loss resulting from the exemption of food. Base broadening of the sales tax would provide a direct benefit to local governments.

Arguments For A Rate Increase

Revenue Yield. Enactment of a 5 percent state government tax rate would lead to a 19.6 percent revenue increase -- the additional one cent tax would have raised approximately $686.3 million in 1995. This total includes a negative $13.3 million adjustment based on anticipated consumer responses to the price increase, i.e. a sales tax revenue loss due to a consumer shift away

[71] Fox (1996) summarizes the findings of numerous empirical studies on spending responses to interstate sales tax differentials.

from taxable consumption. To put this revenue increase in perspective, it is larger than the revenue loss due to the state food exemption, and larger than the yield of the entire Georgia Corporate Income Tax.

Negligible Administrative Costs And Compliance Costs. An increase in the state tax rate raises significant revenue with relatively little increase in administrative costs or compliance costs. The Georgia Department of Revenue would have to correct the tax rate on all printed material but, currently, local sales tax rates change every year and the Department is accustomed to handling these changes. While the incentive to evade a 5 percent state tax rate may be greater, there is no evidence from other states that audit efforts would have to be significantly increased. Nor does the higher tax require additional paperwork on the part of the retailer. As noted above, expanding the sales tax base to cover services would have imposed a significant increase in administrative costs. Adjustments to the tax rate appear to be the easiest sales tax structure changes for both vendors and administration.

A 5 Percent Rate Is Comparable To The Rate In Surrounding States. The state tax rate in Florida and Tennessee is currently 6 percent, and that in South Carolina is 5 percent. The total state and local tax rate in Birmingham, Chattanooga and Jacksonville (and other metropolitan areas in neighboring states) is 6.5 percent or higher. A one percent increase in the Georgia state sales tax rate, would not put the rate on purchases in Georgia counties out of line with that in surrounding states.

A Rate Increase Is More Politically Acceptable Than A Broader Base. A rate increase may be a path of less political resistance than the other two options for sales tax revenue increase.

Bringing services into the base is a "new idea" that requires some selling, and could remove tax preferences that are highly valued by certain influential groups (e.g., physicians, lawyers, accountants). Continuing to tax food at the local level may turn out to be unpopular with voters. Increasing the rate on everyone who consumes may be seen as the most fair and least inflammatory of the choices.

VII. CONCLUSION: WHAT DIRECTION FOR FUTURE REFORM?

The State of Georgia raised $3.6 billion in general sales tax revenue in 1995: 17 cents of every state revenue dollar. This revenue share has been maintained over the past decade and the tax rate is not higher than that in most surrounding states. From all indications, the general sales tax is relatively popular in Georgia. It does not generate negative headlines like the property tax and when the state faced budgetary pressures in 1989, policymakers chose a sales tax increase over an income tax increase. Further, a food exemption dominated an income tax bracket adjustment as the choice for a tax reduction in 1995, and in 1997, local sales tax referenda enjoyed widespread success. It is therefore tempting to conclude that there is little wrong with the current sales tax structure in Georgia.

Reform Issues

This study of the sales tax structure in Georgia reveals significant issues for sales tax reform in the future. The first is a large number of exclusions from the base. The state allows more than

50 specific commodity exemptions, the largest of which is the purchase of food for home consumption. Moreover, the fast-growth service sector of the Georgia economy goes largely untaxed. The result of this relatively narrow tax base is that growth in the sales tax base has been slower than that in the rest of the economy, some consumers are taxed more heavily than others depending on what they purchase, and all Georgians pay a higher nominal sales tax rate to support these exemptions. The second is that a sizable share of sales tax revenue is collected on firm-to-firm purchases. This impacts prices in Georgia and harms the competitive position of Georgia firms. Third, the food exemption has created a major problem for state-local sales tax policy. If the exemption is extended to all local sales taxes, a replacement revenue source for local governments must be found. The Legislature and the Governor have chosen the food exemption as long term policy for the state. This is unlikely to change. If it is not extended, then a crazy quilt pattern of local sales taxation will result where in various counties food will be taxed at 0, 1, 2, or 3 percent.

These three important issues tell us that the state of Georgia is not finished with sales tax reform. In the future, the Governor and the Legislature will have to address the following sales tax policy questions.

1. *Will Georgia Increase its Reliance on the Sales Taxation?*

The answer seems clear that Georgia will rely more on the sales tax. In order to fund the new schools, infrastructure and safety that a growing economy demands, the sales tax seems a likely candidate to carry most of this increased load. In addition, many believe the state has a significant deficiency in social service spending, and its vast needs in the environmental protection area are just becoming apparent. To remedy these deficiencies, the

level of taxation in Georgia would need to approach the national average and heavier sales taxation would be likely.

While there is no popular way to tax citizens to pay for such public services -- no tax, *per se*, ever made a person better off -- the sales tax seems least objectionable. The property tax is widely unpopular in Georgia and one cannot believe that millage increases are a likely candidate to carry this load. In fact, a strong movement is underway to replace local property taxes with local sales taxes. Georgia policymakers appear to be very concerned about economic development and competition; and there will be resistance to increases in either the personal income tax or the corporate income tax.

If the state is to turn to sales taxation to carry more of the revenue load, however, reform will be required. At present, the sales tax is considerably less income-elastic than the income tax, and this means that if no structural changes are made, slower sales tax growth will lead to an automatic decline in relative importance. To buoy revenue up, discretionary change -- rate increase or base expansion -- will be required. If one believes that the sales tax must carry more of the revenue load, and if services are not brought into the base, then the long-run future in Georgia is sales tax rates of 8 percent or higher to support necessary services. This will be a major issue for state legislators to face in the next few years.

2. *Will the Food Exemption Be Extended to All Local Government Sales Taxes?*

Once enacted, food exemptions are rarely repealed. The likely future course for Georgia is a state sales tax with a food exemption. The unresolved question is whether the

exemption will be extended to all local government sales taxes. There would seem to be two choices for state policy.

The first choice is to live with the system where food is treated differently under the different local sales taxes (LOST, SPLOST, HOST, MARTA, Schools), and therefore differently across the 159 counties. One problem with this policy is difficulty in administration, because the tax base is not uniform across the state and responsibility rests with the state. Certainly, extending the food exemption to all local sales taxes would remove some administrative burden. The state would then need to administer only one sales tax base. One area of concern is the variation in the tax rate on food across Georgia, depending on where one shops. This is not a problem, in our view. There is nothing inherently unfair about inter-county variation in sales tax burdens, because county residents choose the tax rate and will benefit from revenues. However, variations in a state administered system should only occur with simple differences in county-level tax rates.

Can Georgia effectively manage a two-base system? Certainly it will be cumbersome, and it will violate most of the rules of good and fair taxation, but there are precedents for split rate sales taxes:

- Within the region, several states apply split tax rates to a specific commodity. In Alabama, rentals are taxed at a lower rate. In North Carolina, grocery purchases benefit from a one percent reduction in the tax rate. Grocery purchases in Louisiana have traditionally been exempt from the state sales tax but not from local sales taxes.

- In Georgia, and in almost every other state, gasoline, alcohol, tobacco and hotel accommodations are subject to specific taxes, apart from the general sales tax.

- Taxes on utilities within the region can also be subject to differential tax rates. For example, telephone service in Florida is taxed at a 7 percent rate where as the general state rate is 6 percent.

The second choice is to extend the food tax exemption to all local government sales taxes. If this is done, a local revenue loss will be implied, and will have to be compensated. The compensation could come in a number of forms:

- Authorization to increase the local government sales tax rate;
- Increased property taxation; or
- The creation of a compensating state grant to local governments, funded from state government taxes.

If the latter is chosen, there is much work to be done in designing the grants distribution system and in determining how it should be financed.

3. *Will the Sales Tax Be Extended to Services?*

Eventually, services must be subject to the sales tax in Georgia. The Legislature will debate this hotly, and special interest groups will argue vehemently to protect preferential treatments. Ultimately, the Georgia sales tax base will be broadened to include many more services. There are many compelling reasons why this must happen.

The most important reason for service taxation is revenue. The inclusion of services is needed to stimulate the growth in the sales tax base, and to maintain the share of total revenue supported by the sales tax in a service economy. If this is not done, more of the tax burden will fall to income taxation and property taxation. The latter is politically less

popular than removing tax preferences for services, and the former (low income tax rates) has been jealously protected on grounds of economic development advantage. By process of elimination, the Legislature and the Governor will face up to the sales taxation of services during the next decade.

Almost as compelling a reason is fairness. Sooner or later, taxpayers and their elected representatives will ask and answer two questions:

1. Is it fair for one family to pay more in sales tax just because it chooses to consume different things, or because its family size leads to a different consumption pattern?

2. Is it fair for all Georgians to pay a four percent sales tax rate (and up to seven percent in all sales taxes), to make up for the revenue lost because certain items are free of sales tax?

There is also the question of the confidence of the public in the sales tax. People are more comfortable with a tax that they understand. With the passage of time, the public may become more sophisticated in their understanding of what the tax system does to them, and may become disenchanted by a sales tax that makes arbitrary distinctions. For example, the rationale for a distinction between a taxable good, a taxable service (e.g. rentals and entertainment services) and an exempt service is probably quite unclear to the taxpaying public (see also Box 6).

4. *Will Firm-to-firm Purchases Continue to Be a Large Share of Sales Tax Collections in Georgia?*

Georgia levies sales taxes on business expenditures such as utilities, equipment and other inputs. This policy adds to the cost of locating a facility in the state. It follows that

removing these costs increases the attractiveness of a site in Georgia. Of course, the same logic is being realized in other states and Georgia will face more pressure in the future to expand firm-to-firm purchase exemptions.

Removing the sales tax on business purchase will be problematic, no matter how much it could help economic development. The biggest problem is the revenue loss. Our best estimate is that the state gets about one-third of its revenue from business purchases. If the sales tax on business purchases is dropped, the nominal state sales tax rate will have to be increased to make up for the revenue loss. For some counties this would move the combined state and local government rate above 8 percent. Another problem is that elimination of the tax on all business purchases is questionable -- if the final product is not taxed, double taxation is not an issue. Yet, incomplete business purchases creates special administrative difficulties. Finally, there is the question of how to monitor business purchase exemptions so that tax evasion does not take place.

Recommendations

1. The Legislature should begin a process of gradually bringing consumer purchases of services into the sales tax base. Lessons from other states suggest that a phase-in is preferred to a comprehensive change where most services are brought into the base at one time.

2. The issue of the inclusion of food in the sales tax base for local governments raises an even larger question: how will local governments be financed, and the potentially explosive issue

of financing schools. The Legislature and the Governor should consider the creation of a Local Government Finance Commission to plan a future for local government expenditure responsibilities and revenue sources.

3. The taxation of business inputs is not healthy for the state economy. The Legislature should begin considering how the tax on certain intermediate inputs can be removed.

4. The list of specific exemptions to the Georgia sales tax is too long, and too laden with special interests. It should be reviewed and some of the more obvious special interest exemptions should be eliminated.

5. The State Legislature should begin to rethink the place of the sales tax in the revenue structure. If it is to occupy its present level of importance, or even a greater importance, then options for reform should be considered.

TABLE 1

SALES TAX TREATMENT OF BUSINESS EQUIPMENT IN SELECTED SOUTHEASTERN STATES

State	State Sales Tax Rate	Sales Tax Rate on Manufacturing Equipment		Pollution Control Equipment
		New and Expansions	Replacement	
Alabama	4%	1.5%	1.5%	Exempt
Florida	6%	Exempt	6%	Mostly taxable
Georgia	4%	Exempt	Exempt	Exempt
North Carolina	4%	1%	1%	1%[a]
South Carolina	5%	Exempt	Exempt	Exempt
Tennessee	6%	Exempt	Exempt	Taxable

Source: Minnesota Capital Equipment Advisory Council (1994).

[a] Maximum tax of $80 per piece of equipment.

TABLE 2

SALES TAX TREATMENT OF SELECTED CONSUMPTION:
GEORGIA AND ITS BORDER STATES,
NOVEMBER 1994
(X Indicates the Item is Exempt)

State	Food for Home Consumption	Non-Prescription Drugs	Telecommunication Services	Electric and Gas Utilities -- Residential
Alabama			X	X[a]
Florida	X	X		X
Georgia	[b]			
North Carolina			X	
South Carolina				X
Tennessee				X
Number of States Exempting	26	8	8	31

Source: Advisory Commission on Intergovernmental Relations (1995a).

[a] Alabama utility service is not taxed under the sales tax statute; however, a 6.7 percent privilege tax, limited to utilities, is considered equivalent to a sales tax (effective 2/1/92).
[b] Georgia began a phase out of the state sales tax on food in 1996.

TABLE 3

STATE SALES TAXATION OF ADMISSIONS AND AMUSEMENTS,
STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Maximum Number of States Taxing[a]	Status in Georgia
Pari-mutuel events	27	T[b]
Amusements, Recreations, & Museums	21	T
Billiard Parlors	36	T[c]
Bowling Lanes	27	T
Cable TV services	24	E
Circuses and fairs--admission and games	34	T
Coin operated video games	20	E
Admission to sports events (schools, colleges)	27	T[d]
Membership Sports Clubs (excl. not for profits)	21	E
Theatrical Productions (incl. not for profits)	31	T
Pinball	22	E
Professional Sports	36	T
Rental of Films by Theaters	9	E
Motion Picture Theater Admission	N/A	T
Video Tape Rental	45	T

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.
[b] Bingo is taxed; the Georgia lottery is exempt.
[c] Coin operated billiards are exempt.
[d] K-12, Non-private, school sporting events are exempt.

TABLE 4

STATE SALES TAXATION OF AUTOMOTIVE SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Carwashes	21	E
Automotive Services (incl. Lube and oil change services)	13	E[b]
Automotive Road Service and Towing	15	E
Automotive Rustproofing and Undercoating	26	T[c]
Automobile Parking	19	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.
[b] Taxed when labor and materials are not.
[c] Secondary Market Service is not taxed.

TABLE 5

STATE SALES TAXATION OF BUSINESS SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Outdoor Ad. Services	4	E
Media Ad. Representatives	3	E
Misc. Advertising		
Newspaper Advertising	4	E
Magazine Advertising	5	E
Advertising agency fees (not ad placement)	8	E
Misc. Business Services		
Bail bond fees	5	E
Interior Design and Decorating	9	E
Sign Construction and Installation	6	E[b]
Telemarketing Services on Contract	6	E
Telephone Answering Service	10	E
Swimming Pool cleaning	15	E
Collection Services	8	E
Comm. Art and Graphic Design	20	E
Linen Supply	33	T
Credit Reporting Services	13	E
Employment Agencies	9	E
Building Cleaning and Maintenance	16	E
Lobbying and Consulting	13	E
Marketing	6	E
Packing and Crating	8	E
Pest Control Services	15	E
Photocopying Services	42	T
Photofinishing Laboratories	44	T
Printing	44	T
Detective and Protective Services[c]	13	E
Process Server Fees	6	E
Management and Public Relations	7	E
Secretarial Services	9	E
Security System Services	14	E
Temporary Help Agencies	10	E
Testing Laboratories	8	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.
[b] Taxed if a physical product is produced and delivered to the purchaser.
[c] Includes armored car.

TABLE 6

STATE SALES TAXATION OF COMPUTER SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing	Status in Georgia
Pre-Packaged computer Software	46	T
Software-custom programs-material	28	T
Computer Programming Services	34	E
Software-custom programs-servicers	15	E
Information Retrieval Services	14	E
Data Processing Services	12	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: T = Taxed
E = Exempt

TABLE 7

STATE SALES TAXATION OF CONSTRUCTION SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
General Contractor Services	11	E
Special Trade Contractor Services	13	E
Water Well Drilling Contractors	9	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
NR = Not Reported
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.

TABLE 8

STATE SALES TAXATION OF FABRICATION, INSTALLATION & REPAIR,
STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Misc. Repair Services (incl. welding and repair shops)	23	E[b]
Radio and TV Repair Services	23	E[b]

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.
[b] Fabrication labor and parts are taxable. Installation labor, when separately stated, is not taxed.

TABLE 9

STATE SALES TAXATION OF FINANCE, INSURANCE & REAL ESTATE,
STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Service charges of banks	3	E
Insurance services	6	E
Investment Counseling and Transactions	6	E
Loan Broker Fees	6	E
Real Estate services	6	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.

TABLE 10

STATE SALES TAXATION OF LEASES & RENTALS, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Misc. Equipment Rental	45	T
Heavy Construction Equipment Rental	45	T
Automotive Rental	45	T
Hotels and Motels	50	T
Campgrounds	27	E
Cable Box Rental	N/A	T

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.

TABLE 11

STATE SALES TAXATION OF PERSONAL SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Barber and Beauty Shops	6	E
Carpet and Upholstery Cleaning	14	E
Diaper Service	23	T
Coin Operated Laundries	8	E
Laundry and Garment Services	21	E
Funeral Services	15	T
Misc. Personal Services		
Dating Services	10	E
Debt Counseling	7	E
Tanning Parlors	18	E
Tuxedo Rental	39	T
Telephone Information and Entertainment (900 Numbers)	20	E
Shoe Repair & Shoeshines	21	E
Tax Return Prep. Services	7	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
NR = Not Reported
T = Taxed
E = Exempt

[a] The subcategory identified with the most frequent taxation.

TABLE 12

STATE SALES TAXATION OF PROFESSIONAL SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing[a]	Status in Georgia
Accounting Services	5	E
Legal Services	5	E
Dentistry Services	4	E[a]
Engineering Services	5	E
Surveying Services	7	E
Medical Laboratories	4	E[a]
Nursing and Personal Care Facilities	4	E
Medical Doctor Services	4	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: T = Taxed
E = Exempt

[a] Estimated gross receipts multiplied by 0.04.

TABLE 13

STATE SALES TAXATION OF UTILITIES SERVICES, STATUS IN GEORGIA AND NUMBER OF STATES WHERE SERVICE IS TAXED

Type of Service	Number of States Taxing	Status in Georgia
Electricity (Industrial)	37	T
Electricity (Residential)	23	T
Intrastate Telephone (Industrial)	44	T [a]
Intrastate Telephone (Residential)	42	T [a]
Interstate Telephone (Industrial)	20	E
Interstate Telephone (Residential)	19	E
Natural Gas (Industrial)	38	T
Natural Gas (Residential)	23	T
Sewer and Refuse (Industrial)	11	E
Sewer and Refuse (Residential)	10	E
Water Supply (Industrial)	20	E
Water Supply (Residential)	12	E

Source: Federation of Tax Administrators (1994) and Galbraith (1993).

Note: N/A = Not Available
T = Taxed
E = Exempt

[a] Local telephone service is taxed; intrastate long distance service is exempt. Georgia is one of only three state which tract interstate services this way.

TABLE 14

SALES TAX BASE AS A PERCENT OF PERSONAL INCOME
AND HIGHEST STATE AND LOCAL SALES TAX RATE, FY 1994

States	Sales Tax Base as a Percent of Personal Income	Highest State and Local Sales Tax Rate (in percent)
United States	43.40	9.00
Alabama	44.7	9
Alaska	0.0	4
Arizona	69.5	7.2
Arkansas	69.5	6.5
California	41.1	8.5
Colorado	48.8	7.35
Connecticut	39.6	6
Delaware	0.0	0
Florida	58.7	7
Georgia	**61.5**	**6**
Hawaii	121.3	4
Idaho	55.8	7
Illinois	28.3	8.75
Indiana	45.7	5
Iowa	53.5	6
Kansas	52.5	6.9
Kentucky	40.6	6
Louisiana	48.5	9
Maine	44.4	6
Maryland	30.6	5
Massachusetts	31.3	5
Michigan	38.8	4
Minnesota	44.3	7.5
Mississippi	58.4	7
Missouri	50.9	6.85
Montana	0.0	0

TABLE 14 (CONTINUED)

SALES TAX BASE AS A PERCENT OF PERSONAL INCOME
AND HIGHEST STATE AND LOCAL SALES TAX RATE, FY 1994

States	Sales Tax Base as a Percent of Personal Income	Highest State and Local Sales Tax Rate (in percent)
Nebraska	47.0	6.5
Nevada	58.1	7
New Hampshire	0.0	0
New Jersey	29.8	6
New Mexico	108.7	6.25
New York	35.3	9
North Carolina	49.7	6
North Dakota	46.7	6
Ohio	41.1	7
Oklahoma	44.0	8.375
Oregon	0.0	0
Pennsylvania	33.4	7
Rhode Island	27.8	7
South Carolina	54.6	6
South Dakota	65.2	6
Tennessee	54.6	8.25
Texas	46.3	8.25
Utah	64.7	6.25
Vermont	31.5	5
Virginia	36.3	4.5
Washington	77.7	8.2
West Virginia	41.0	6
Wisconsin	48.5	5.5
Wyoming	53.5	5
District of Columbia	48.3	5.75

Source: United States Bureau of Census (1994) and Advisory Commission on Fiscal Federalism (1995).

TABLE 15

DISTRIBUTION OF LOCAL SALES AND USE TAXES IN GEORGIA
OCTOBER 1, 1996

Type of Local Tax	Number of Counties
Local Option and Special Local Option	123
Local Option and MARTA	1
Local Option Only	27
Special Local Option Only	4
Marta Only	1
Other[a]	1
Total Tax Rate	
6%	125
5%	32
4%	2

Source: Georgia Department of Revenue, unpublished data.

[a] Towns county has received state authority to levy two separate local sales taxes.

TABLE 16

STATE AND LOCAL GENERAL SALES TAX RATES
SELECTED CITIES IN GEORGIA AND NEIGHBORING STATES
JUNE, 1995

State	City (County)	State Tax	County Tax	City Tax	Other	Combined State-Local Tax Rate
Alabama	Birmingham (Jefferson)	4.0	1.0	3.0		8.0
	Huntsville (Madison)	4.0		2.5		6.5
	Mobile (Mobile)	4.0	1.0	4.0		9.0
	Montgomery (Montgomery)	4.0	1.5	2.5		8.0
	Tuscaloosa (Tuscaloosa)	4.0	2.0	2.0		8.0
Florida	Fort Lauderdale (Broward)	6.0				6.0
	Jacksonville (Duval)	6.0	0.5			6.5
	Miami (Dade)	6.0	0.5			6.5
	Orlando (Orange)	6.0				6.0
	St. Petersburg (Pinellas)	6.0	1.0			7.0
	Tallahassee (Leon)	6.0	1.0			7.0
	Tampa (Hillsborough)	6.0	0.5			6.5
Georgia	Atlanta (Fulton)	4.0	1.0		1.0 [a]	6.0
	Columbus (Muscogee)	4.0	1.0			5.0
	Savannah (Chatam)	4.0	1.0			5.0
North Carolina	Charlotte (Mecklenburg)	4.0	2.0			6.0
	Durham (Durham)	4.0	2.0			6.0
	Raleigh (Wake)	4.0	2.0			6.0
	Winston-Salem (Forsyth)	4.0	2.0			6.0
South Carolina	Charleston (Charleston)	5.0	1.0			6.0
Tennessee	Chattanooga (Hamilton)	6.0	1.75			7.75
	Knoxville (Knox)	6.0	2.25			8.25
	Memphis (Shelby)	6.0	2.25			8.25
	Nashville (Davidson)	6.0	2.25			8.25

Source: Advisory Commission on Intergovernmental Relations (1995).

[a] Fulton county collects 1 percent on taxable transactions to fund the Metropolitan Atlanta Rapid Transit Authority.

TABLE 17

GEORGIA STATE GOVERNMENT SALES TAX REVENUE
1980 TO 1996

Year	Sales Tax Revenue[a] (in millions)	Real Sales Tax Revenue (in millions) 1982-84=100	Georgia Personal Income (in millions)	State Sales Tax as a Percent of Total State Revenues
1980	1,006	1,386	43,337	38.3
1981	1,108	1,345	48,875	38.1
1982	1,189	1,308	53,943	37.6
1983	1,271	1,317	58,138	37.5
1984	1,461	1,467	65,568	38.3
1985	1,633	1,572	73,453	37.3
1986	1,735	1,612	80,381	36.6
1987	1,812	1,653	86,935	35.6
1988	1,941	1,709	94,064	35.1
1989	2,113	1,786	101,429	34.7
1990	2,740	2,210	107,558	40.3
1991	2,771	2,120	114,295	40.4
1992	2,792	2,050	120,884	39.9
1993	3,088	2,201	129,547	39.5
1994	3,375	2,336	137,665	40.0
1995	3,645	2,460	147,702	40.0
1996	4,217	2,767	162,126	42.5

Source: Georgia Department of Revenue, *Statistical Report*, various years, U.S. Bureau of Economic Analysis, (1996).

[a] This sales tax total represents collections after vendor discounts and adjustments. It differs from general sales tax revenue in these adjustments and motor fuel collections.

TABLE 18

ESTIMATES OF THE BASE ELASTICITY OF THE GEORGIA SALES TAX FROM THE TRADITIONAL REVENUE-INCOME ELASTICITY MODEL[a]

Independent Variable	Regression Coeffient[b]
Income	0.796 (0.026)
Constant	1.891 (0.043)
R^2	0.984
No. of Observations (1980-1996)	17
Degrees of Freedom	15

Source: Author's calculations based on data from Georgia Department of Revenue, *1996 Statistical Report* (and various years).

[a] Dependent variable is taxable sales, estimated for each year as the quotient of sales tax revenue and the nominal rate.

[b] Ordinary least squares estimate with standard error shown in parenthesis. All variables expressed in logarithms.

TABLE 19

SALES TAX REVENUE - INCOME ELASTICITY ESTIMATES FOR SELECTED STATES

	Elasticity Estimate (t statistic)	R^2
Broad Based Sales Taxes		
Arizona	0.8366 (30.3130)	0.973
Arkansas	0.9059 (33.8220)	0.992
Georgia	0.8689 (27.8807)	0.997
Hawaii	1.0970 (78.8490)	0.994
Mississippi	0.7618 (17.5094)	0.989
New Mexico	0.9206 (7.1076)	0.990
Wyoming	0.9295 (8.6416)	0.974
Narrow Based Sales Taxes		
Connecticut	1.0708 (44.9706)	0.961
Maryland	0.9203 (17.3498)	0.795
Massachusetts	1.2220 (40.1439)	0.978
Minnesota	0.9179 (59.3247)	0.978
New Jersey	0.9983 (43.3905)	0.988
New York	0.7882 (14.3346)	0.914
Ohio	0.9920 (41.1169)	0.991
Pennsylvania	1.0145 (43.5308)	0.959
Rhode Island	0.9135 (16.8827)	0.983
Virginia	0.8397 (31.1515)	0.994

Source: John L. Mikesell, "Fiscal Effects of Differences in Sales Tax Coverage: Revenue Elasticity, Stability and Reliance," *in Proceedings of the Eighty-Fourth Annual Conference on Taxation of the National Tax Association--Tax Institute of America* (Columbus, Ohio: 1992), p. 56.

TABLE 20

INCOME ELASTICITIES AND MEAN SQUARED ERRORS FOR GEORGIA SALES TAX COMMODITY GROUPS 1980 TO 1995

Commodity Group	Percent of 1995 Gross Collections	Income Elasticity[a]	Mean Squared Error
Food	22.06	1.050 (0.051)	0.00503
Apparel	2.93	1.238 (0.057)	0.00623
General Merchandise	12.95	1.039 (0.047)	0.00424
Automotive	6.04	0.849 (0.043)	0.00362
Furniture	7.86	1.433 (0.042)	0.00344
Lumber	7.69	1.165 (0.058)	0.00664
Services	8.31	1.329 (0.044)	0.00384
Manufacturing	5.66	0.825 (0.034)	0.00228
Utilities	9.08	0.716 (0.064)	0.00809
Miscellaneous	7.42	1.423 (0.068)	0.00904

Source: Author's calculations based on Georgia Department of Revenue, *Statistical Report* (various years).

[a] Standard error shown in parenthesis.

TABLE 21

ESTIMATED REVENUE OF MAJOR EXEMPTIONS: FOOD FOR HOME CONSUMPTION; HOUSING MATERIALS; AND NON-HOUSING SERVICES
FISCAL 1995
(IN MILLIONS OF DOLLARS)

Expenditure	Fiscal 1995 Total[a]
Unadjusted Georgia Revenue Loss for full Food for Home Consumption (excluding alcoholic beverages) Exemption	$466.6
Taxable Expenditure Adjustment (Loss from the Consumer Demand Response to a Decrease in the Price of Groceries)	(78.8)
Adjusted Revenue Loss for a Food for Home Consumption Exemption	545.4
Unadjusted Georgia Revenue Gain From Housing Construction Labor	218.2
Unadjusted Georgia Revenue Gain From a Tax on Services	1,567.6
Taxable Expenditure Adjustment (Consumer Demand Response to an Increase in the Price of Services)	(18.2)
Adjusted Revenue Loss for a Food for Home Consumption Exemption	1,549.4

[a] Exempt, non-housing services include clothing repair and cleaning, barbershops and beauty parlors, water and sanitation, telephone and telegraph, domestic, medical care, personal business (less ½ funeral services), taxicab, insurance, clubs and fraternal organization, and education services. The services total also includes estimates of the labor share of automobile and electronic repairs where the share is derived from the *1992 Census of Services*. This estimate understates the gross labor charges by repair firms but we believe the alternative measure available, total receipts by repair services, grossly overstates the revenue potential from these firms.

TABLE 22

INCOME ELASTICITY ESTIMATES FOR ALTERNATIVE GEORGIA SALES TAX BASES

	Income Elasticity Estimate (Standard Error)	Mean Squared Error Estimate[1]
Total Consumption	0.960 (0.0008)	1.97E-04
Simulated Actual Georgia Tax Base	0.872 (0.003)	4.26E-04
Simulated Georgia Tax Base Without Food	1.002 (0.003)	5.61E-04
Simulated Georgia Tax Base Without Food and including all Services Currently Exempt in Georgia	1.17 (0.015)	2.05E-03

Source: Hawkins (1996), United States Bureau of Economic Analysis (1992) and (1996), United States Bureau of Labor Statistics (1994) and (1995) and authors' calculations.

TABLE 23

PER CAPITA GENERAL SALES TAX REVENUE,
GEORGIA, THE UNITED STATES AND SELECTED SOUTHEASTERN STATES FOR 1993 AND 1994

	1993 State and Local General Sales Tax Revenue	1993 Local General Sales Tax Revenue	1994 State General Sales Tax Revenue	Local Government Share of Total Sales Tax Revenues
Georgia	$578	$147	$463	25.4
United States Average	540	94	475	17.4
Georgia Region Average	**598**	**85**	**548**	**14.2**
Alabama	465	180	303	38.7
Florida	697	20	719	2.9
North Carolina	477	139	366	29.1
South Carolina	440	11	459	2.5
Tennessee	720	160	595	22.2

Source: United States Bureau of the Census. State and Local Government Finance Estimates by State: 1992-1993. Unpublished, World Wide Web data.

TABLE 24

GENERAL SALES TAX REVENUE AS A PERCENT OF PERSONAL INCOME, GEORGIA, THE UNITED STATES AND SELECTED SOUTHEASTERN STATES

	1993 State and Local General Sales Tax Revenue	1993 Local General Sales Tax Revenue	1994 State General Sales Tax Revenue
Georgia	**3.1**	**0.8**	**2.4**
United States Average	2.6	0.5	2.2
Georgia Region Average	3.2	0.5	2.7
Alabama	2.8	1.1	1.7
Florida	3.5	0.1	3.4
North Carolina	2.6	0.8	1.9
South Carolina	2.7	0.1	2.7
Tennessee	4.0	0.9	3.2

Source: United States Bureau of the Census. *State and Local Government Finance Estimates by State: 1992-1993.* Unpublished, World Wide Web data.

TABLE 25

THE DISTRIBUTION OF TAX BURDENS BY INCOME CLASS: THE TRADITIONAL HOUSEHOLD INCOME APPROACH

Income Class (in dollars)	Average Sales Tax Liability (in dollars)	Average Household Income (in dollars)	Effective Tax Rate (ETR)[a] (in percent)
less than 2,617	190	1,427	13.31
2,617 - 6,829	217	5,140	4.23
6,829 - 10,929	274	8,843	3.10
10,929 - 15,215	304	13,099	2.32
15,215 - 20,110	355	17,705	2.01
20,110 - 26,477	395	23,245	1.70
26,477 - 35,240	472	30,643	1.54
35,240 - 46,894	546	40,537	1.35
46,894 - 66,141	650	55,348	1.17
more than 66,141	888	91,922	0.97

Source: Authors' calculations based on the United States Bureau of Labor Statistics, *1990-1992 Consumer Expenditure Survey* (data tape).

[a] Sales tax liability as a percent of average household income.

TABLE 26

THE EFFECTIVE GEORGIA SALES TAX RATE
REFERENCED BY HOUSEHOLD EXPENDITURES

Expenditure Class (in dollars)	Average Sales Tax Liability (in dollars)	Average Household Expenditures (in dollars)	Effective Tax Rate (ETR) (in percent)[a]
less than 7,492	164	5,716	2.87
7,492-10,315	238	8,894	2.67
10,315-12,737	297	11,505	2.58
12,737-15,214	347	13,696	2.54
15,214-17,951	402	16,586	2.42
17,951-21,240	468	19,515	2.40
21,240-25,402	553	23,211	2.38
25,402-30,935	654	28,023	2.33
30,935-40,426	795	35,221	2.26
more than 40,426	1,215	57,059	2.13

Source: Authors' calculations based on the United States Bureau of Labor Statistics, *1990-1992 Consumer Expenditure Survey* (data tape).

[a] Sales tax liability as a percent of average household income.

TABLE 27

THE EFFECTIVE GEORGIA SALES TAX RATE,
BY INCOME REFERENCED HOUSEHOLD SIZE

Household Size	Weighted Number of Households	Average Sales Tax Liability	Average Total Household Income	Effective Tax Rate (ETR)
One person	744,833	$244	$14,595	1.67
Two people	749,841	443	32,012	1.38
Three people	420,192	513	34,999	1.47
Four people	374,771	559	38,824	1.44
Five people	163,963	589	35,870	1.64
Six or more people	90,613	613	35,647	1.75

Source: Authors' calculations based on the United States Bureau of Labor Statistics, *1990-1992 Consumer Expenditure Survey* (data tape).

TABLE 28

THE EFFECTIVE GEORGIA SALES TAX RATE,
BY EXPENDITURE REFERENCED HOUSEHOLD SIZE

Household Size	Weighted Number of Households	Average Sales Tax Liability	Average Household Expenditures	Effective Tax Rate (ETR)
One person	744,833	$321	14,319	2.24
Two people	749,841	535	22,736	2.35
Three people	420,197	603	25,952	2.32
Four people	374,771	645	27,679	2.33
Five people	163,963	665	27,471	2.42
Six or more people	90,013	680	26,715	2.54

Source: Authors' calculations based on the United States Bureau of Labor Statistics, *1990-1992 Consumer Expenditure Survey* (data tape).

TABLE 29

STATE REVENUE ESTIMATES FOR ADDING SERVICE GROUPS A, B, C AND E TO THE GEORGIA SALES TAX[a]

Service Classification	1994 Revenue Estimate (in Millions)
Group A	$197.3
Group B	163.0
Group C	771.5
Group E	87.9

Sources: United States Bureau of the Census (1994a) and (1994b).

[a] Service groups are defined in Table 30.

TABLE 30

DEFINITION OF SERVICE GROUPS A, B, C AND E

Groups	Types of Services
A	Toll Telephone Charges, Bank Service Charges, Cable Television, Campgrounds, Garment Cleaning Services, Diaper Service, Fur Storage Services, Laundry and Garment Services, Carpet and Upholstery Cleaning, Power Laundries, Linen Supply, Coin Laundries and Dry-Cleaning, Beauty Shops, Barber Shops, Shoe Repair & Shoeshines, Funeral Services (½ Exempt), Miscellaneous Personal Services, Telephone (900 and 976), Tanning Parlors, Business Services, Tuxedo Rental, Misc. Personal Services, Tax Return Prep. Services, Debt Counseling, Dating Services, Services to Buildings and Dwellings, Pest Control Services, Window Cleaning and Maintenance, Automobile Parking, Auto. Services Except Repair, Automotive Road Service and Towing, Automotive Rustproofing and Undercoating, Carwashes.
B	Garbage Collection, Construction, Storage Services, Engineering and Management Services, Engineering Services, Architectural Services, Surveying Services.
C	Legal Services, Reporting Agencies, Collection Services, Credit Reporting services, Mailing, Reproduction, Commercial Art and Graphic Design, Photocopying Services, Secretarial Services, Personnel Supply, Employment Agencies, Temporary Help Agencies, Computer Services, Software -- custom, Mainframe Access, Data Processing Services, Pre-Packaged Computer Software, Information Retrieval Services, Computer Programming Services, Miscellaneous Business Services, Swimming Pool Cleaning and Maintenance, Telephone Answering Service, Process Server Fees, Telemarketing Services on Contract, Misc. Business Services, Interior Design and Decorating, Bail Bond Fees, Detective and Protective Services, Photo finishing Laboratories, Armored Car Services, Security System Services, Medical Doctor Services, Dentistry Services, Nursing and Personal Care Facilities, Medical laboratories, Accounting Services, Testing Laboratories, Management and Public Relations, Marketing, Lobbying and Consulting.
E	Automotive Repair, Tire Retreading and Repair, Specialty Auto Repair, Electrical Repair Service, Radio and TV Repair, Miscellaneous Repair Services, Welding and Repair Services, Water Through Pipes, Lottery Tickets, Crab Bait.

TABLE 31

TAX BURDEN BY INCOME CLASS: A GEORGIA SALES TAX ON SERVICES[1]

Average Annual Income	Average Non-Housing Services Expenditures	Average Sales Tax Liability	Effective Tax Rate	Total Sales Tax Liability for all Goods and Services[2]	Effective Tax Rate
$0-$2,616	$2,485	$99.4	7.0	$299	21.0
2,617-6,829	2,076	83.1	1.6	328	6.4
6,830-10,929	2,517	100.7	1.1	400	4.5
10,930-15,215	3,461	138.4	1.1	504	3.8
15,216-20,110	3,937	157.5	0.9	560	3.2
20,111-26,477	3,989	159.6	0.7	635	2.7
26,478-35,240	5,326	213.0	0.7	785	2.6
35,241-46,894	6,078	243.1	0.6	917	2.3
46,895-66,141	7,351	294.0	0.5	1,106	2.0
more than 66,142	10,815	432.6	0.5	1,507	1.6

Source: Authors' calculations.

[1] These estimates are for all non-housing service consumption by households.
[2] Includes food for home consumption.

TABLE 32

TAX BURDEN BY INCOME CLASS
EFFECTIVE FOOD TAX RATES WITH AND WITHOUT FOOD STAMPS

Income Class	Average Food for Home Consumption Expenditures	Home Food Expenditures (Assuming no use of Food Stamps)		Home Food Expenditures (Assuming use of Food Stamps)	
		Sales Tax per Household	Effective Tax Rate	Sales Tax per Household	Effective Tax Rate
$0-$2,616	$1,831	$73	5.1	$34	2.4
2,617-6,829	1,926	77	1.5	76	1.5
6,830-10,929	2,339	94	1.1	94	1.1
10,930-15,215	2,470	99	0.8	99	0.8
15,216-20,110	2,775	111	0.6	111	0.6
20,111-26,477	2,905	116	0.5	116	0.5
26,478-35,240	3,215	129	0.4	129	0.4
35,241-46,894	3,539	142	0.3	142	0.3
46,895-66,141	3,938	158	0.3	158	0.3
more than 66,142	4,663	187	0.2	187	0.2

Source: United States Bureau of Labor Statistics, *Consumer Expenditure Survey 1990-91 and 1991-1992*, Data Tape, Georgia Department of Human Resources, *Eligibility/Payment Tables*, September 1994, unpublished and authors' calculations.

TABLE 33

TAX BURDEN BY HOUSEHOLD
EFFECTIVE FOOD TAX RATES BY HOUSEHOLD SIZE[a]

Household Size	Average Food (home consumption) spending	Average Annual Income before taxes	Food Tax Liability	Effective sales tax rate
One person	$1,460	$14,595	58	0.40
Two people	2,841	32,012	114	0.35
Three people	3,367	34,999	135	0.38
Four people	3,891	38,824	156	0.40
Five people	4,364	35,870	174	0.49
Six or more people	5,189	35,647	208	0.58

Source: United States Bureau of Labor Statistics, *Consumer Expenditure Survey 1990-91 and 1991-1992*, Data Tape, Georgia Department of Human Resources, *Eligibility/Payment Tables*, September 1994, unpublished and authors' calculations.

[a] Not accounting for food stamps.

TABLE 34

PROJECTED REVENUE LOSS FOR THE EXEMPTION OF FOOD FOR HOME CONSUMPTION FROM THE GEORGIA SALES TAX, 1997 TO 2000
(IN MILLIONS OF DOLLARS)

Fiscal Year	Food for Home Consumption Forecast	Gross Incremental Revenue Loss From Exempting Food (2% in 1997,[a] 3% in 1998, 4% in 1999)	Demand Adjustment	Adjusted Incremental Revenue Loss
1997	11,952.2	239.0	33.8	272.8
1998	12,668.1	125.3	19.5	144.8
1999	13,530.1	133.8	20.9	154.7

Source: Food consumption forecast from "United States Bureau of Economic Analysis," *Survey of Current Business*, various issues, United States Bureau of Economic Analysis, *News Release*, September 24, 1996 and author's calculations.

[a] Exemptive became effective in October, 1996.

TABLE A-1

REVENUE LOSS FROM EXEMPT MAIL ORDER SALES,
GEORGIA AND ALL SALES TAX STATES,
1994

	Value of Mail Order Transactions	Revenue Loss	Revenue Loss as a Percent of Total Revenue
Georgia	1,403	72.9	2.2
Total, All States with a General Sales Tax	56,622	3,301.5	2.7

Source: Advisory Commission on Intergovernmental Relations (1994).

TABLE D-1

COEFFICIENT ESTIMATES FOR THE HOUSEHOLD DETERMINANTS
OF EXPENDITURES ON NEW AUTOMOBILES

Parameter	Estimate	Std. Err	t-statistic
Constant	4,431.95	(646.4)	6.86
Income	0.22	(0.0362)	6.18
Expenditures (Less Autos)	0.49	(0.1200)	4.11
Expenditures (Less Autos)^2	-4.3e-06	(3.8e-06)	1.13
Number of Household	-682.61	(127.8)	5.34
Sex	17.29	(455.9)	0.04
Race	-79.41	(608.5)	0.13

Source: Author's calculations.

Figure 1

Georgia State Sales Tax Base in Real, Per-Capita Dollars

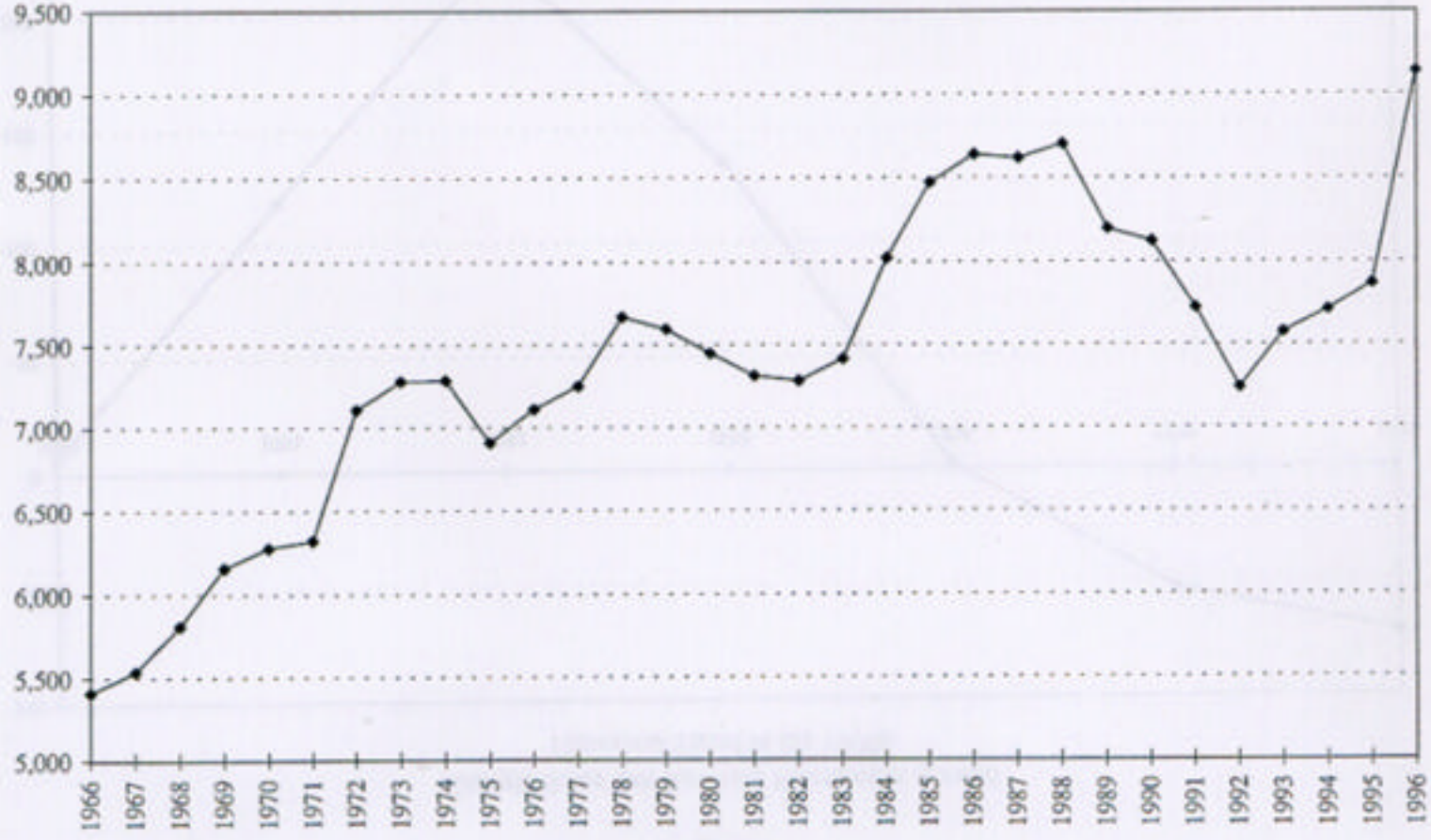


Figure 2

Georgia Sales Tax Revenue Fluctuation Around
Historical Trend in the 1990s

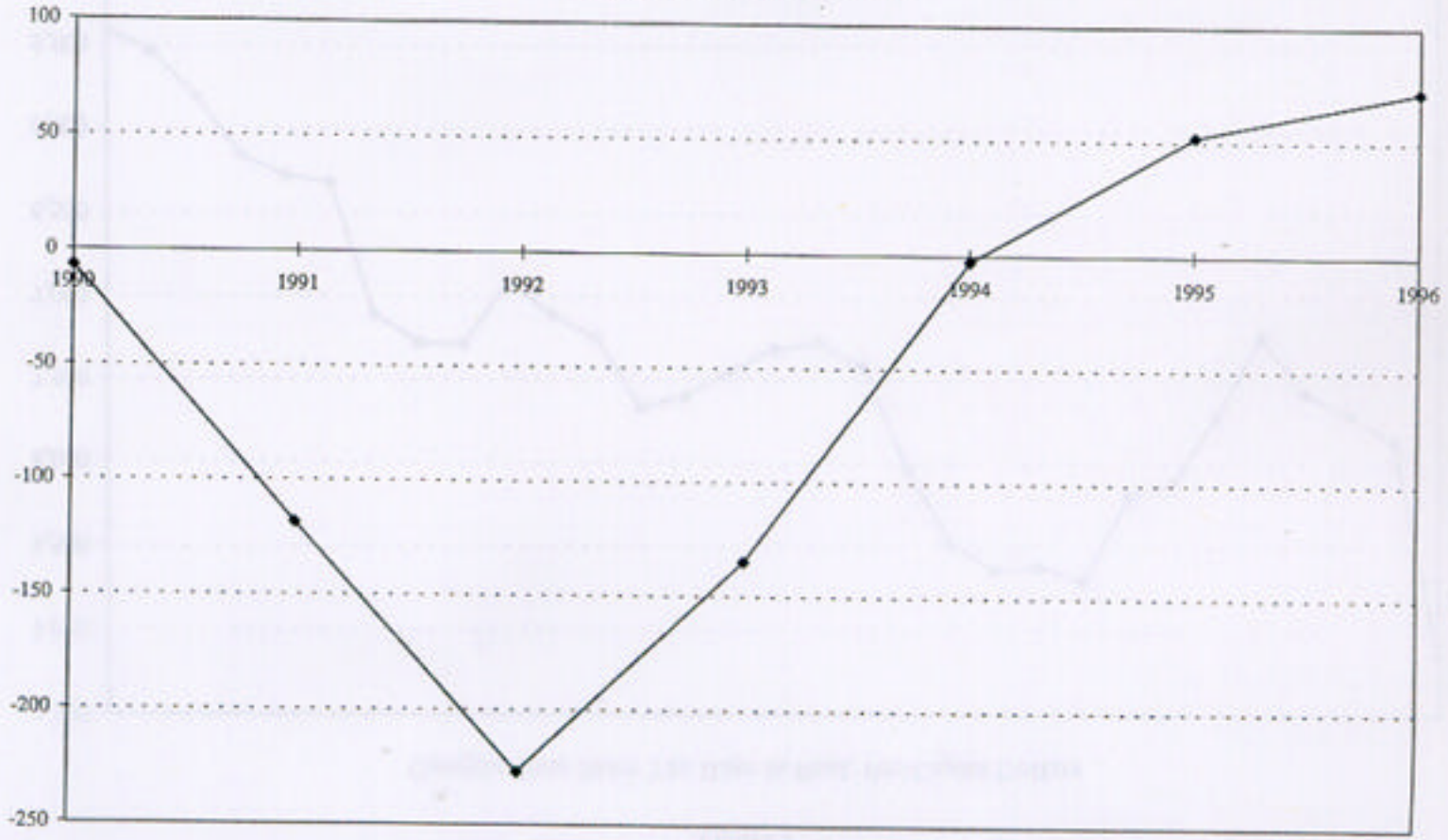


Figure 3

Effective State Sales Tax Rates for Georgia Income Classes

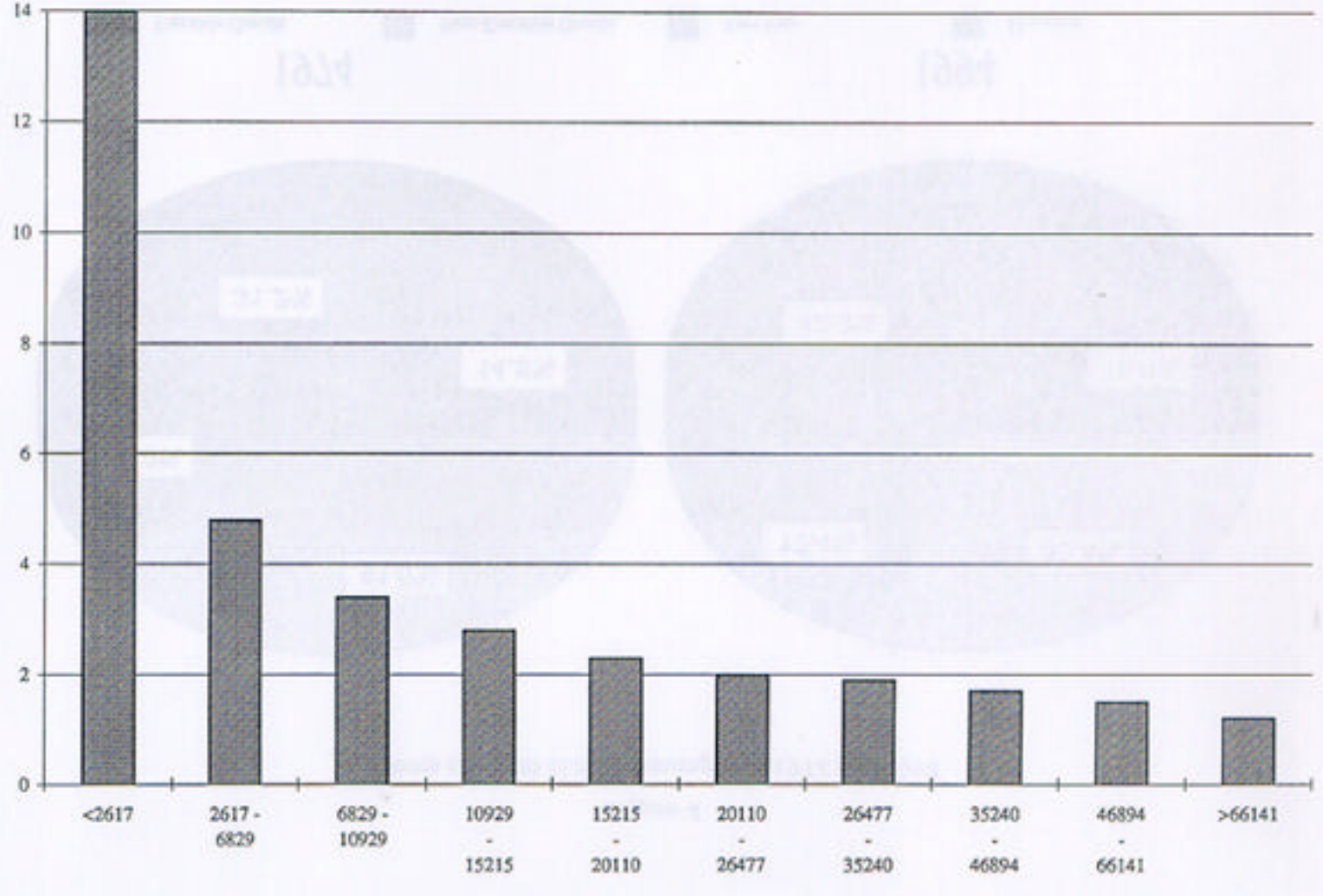


Figure 4

Shares of Total U.S. Consumption, 1974 and 1994

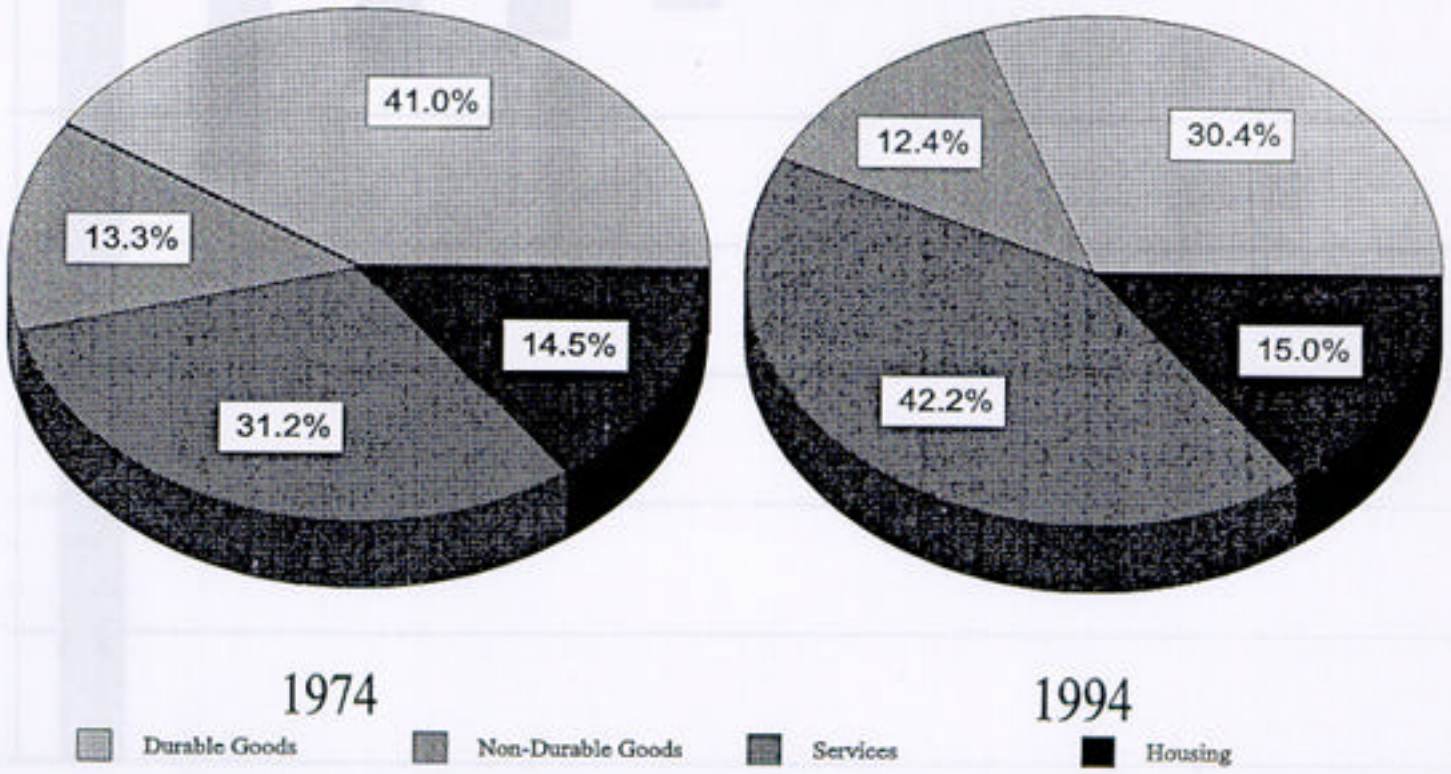


Figure 5

Distribution of Food Exemption Tax Relief by Income Quintile

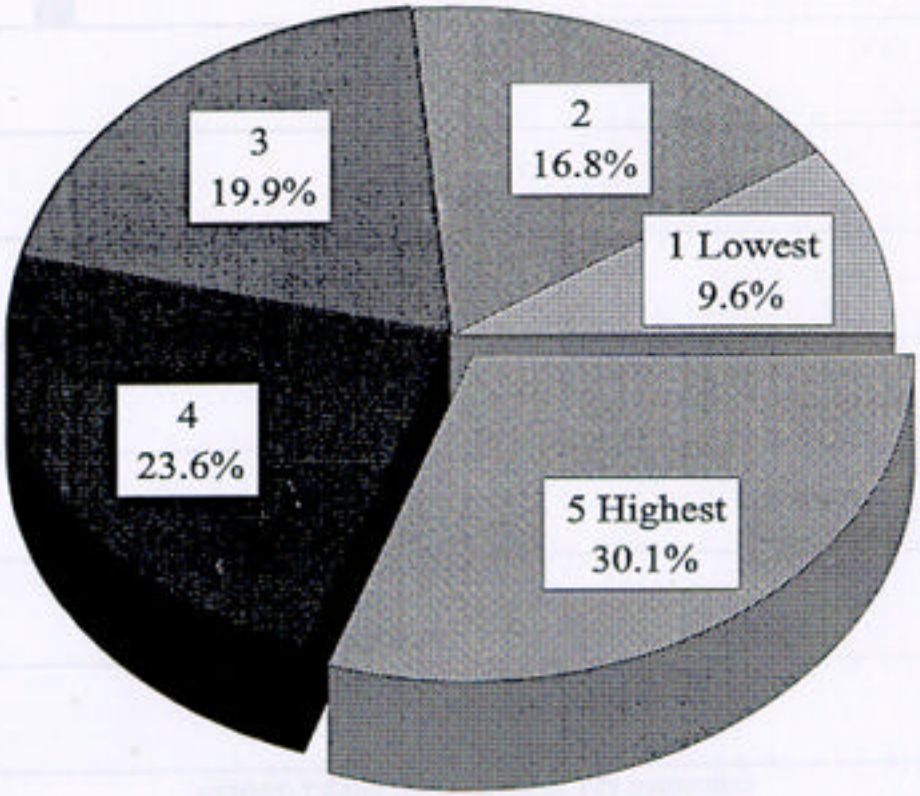
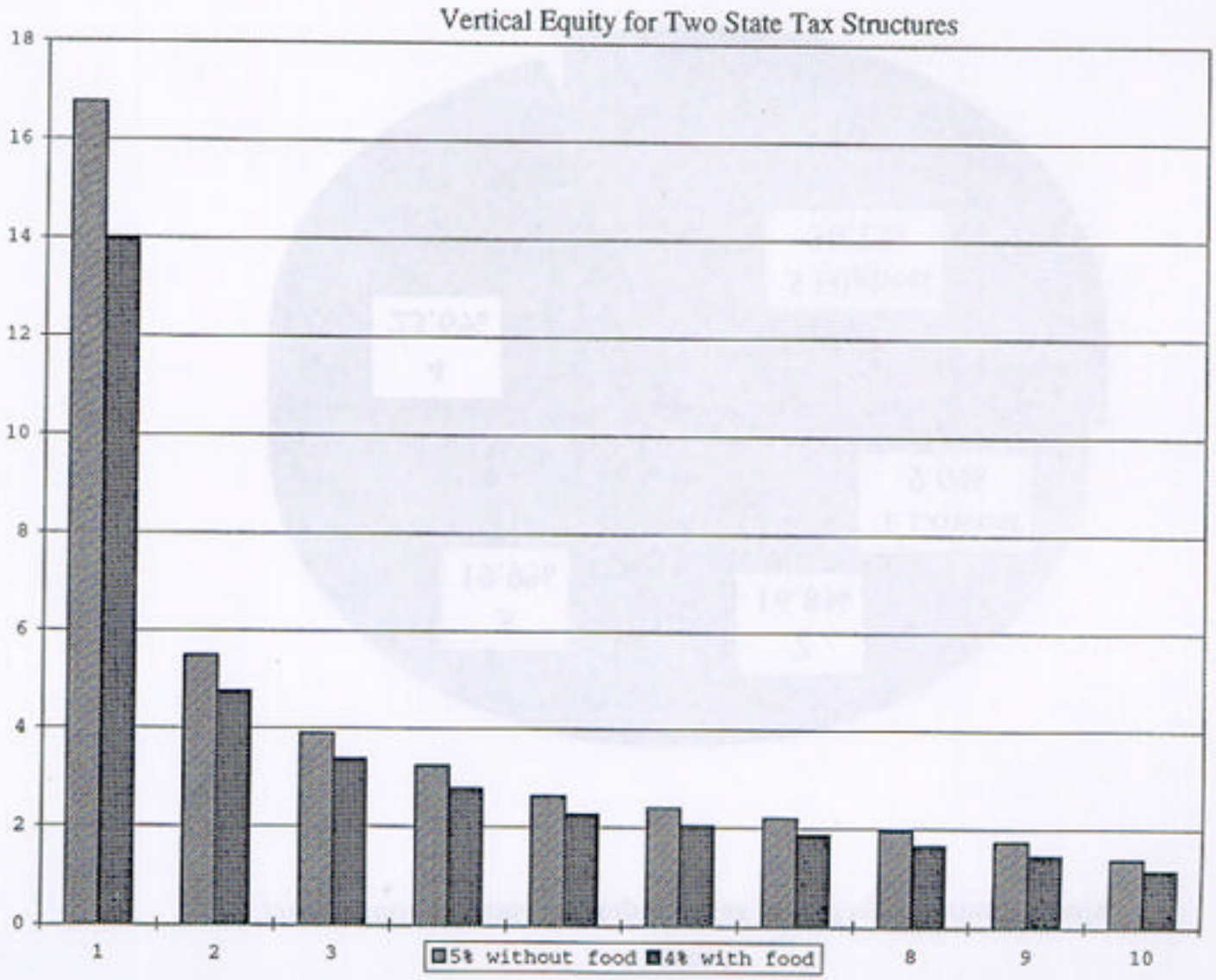


Figure 6


Vertical Equity for Two State Tax Structures
18
16
14
12
10
8
6
4
2
0
1
2
3
5% without food
4% with food
8
9
10

APPENDIX A

SALES TAX ADMINISTRATION

One might think of the tax administration function as having five steps:

1. Identification of taxpayers
2. Recordkeeping and maintaining the tax roll
3. Overseeing or carrying out assessment
4. Collection
5. Audit and appeals

These activities all fall under the mandate of the State Revenue Department: implement the sales tax at reasonable cost and to ensure compliance with the law.

The remainder of this appendix describes these functions of Georgia's Department of Revenue and identifies the methods used to accomplish these functions. The presentation is organized around the initiation, maintenance and audit functions, with note that the sequential nature of these functions is important. For example, the difficulty of carrying out the audit function depends on the quality of the earlier responsibilities. In the audit example, taxpayers who know the status of particular transactions and have kept up with recent rulings and local tax rate changes are less costly to audit. Thus, strength in one area improves the efficiency of the Georgia Department of Revenue in others. A brief discussion of audit alternatives follows the description of the three major functions of the department. This appendix concludes with discussions of the cost of administering Georgia's Department of Revenue and the compliance costs that a vendor in Georgia faces.

Identification of Taxpayers

The first step in a tax administration process is the identification of those who are liable to pay. The Georgia Department of Revenue identifies those who must register to collect and remit Georgia's sales tax with the following clauses:

> "Every person, firm, or corporation who sells, uses, distributes, or manufactures tangible personal property in Georgia should register for sales and use tax if:
>
> They sell tangible personal property in Georgia for any purpose;
> They import goods from any state or foreign country for sale at retail, or for use, consumption distribution, or storage in Georgia;
>
> They lease or rent tangible personal property in Georgia for consideration without acquiring title to the property;
>
> They maintain an office, distribution house, sales room, or warehouse in Georgia from which tangible personal property is sold;
>
> They acquire parts to manufacture tangible personal property for sale at retail or for use, consumption, distribution, or storage in Georgia;
>
> They solicit orders for tangible personal property within Georgia."[1]

The registration requirement is important because its phrasing reflects the scope of sales tax registration desired by the Georgia Department of Revenue. The six clauses each target a type of vendor who the Department of Revenue believes may be liable for sales and use tax collections. If an activity is absent from the list, it doesn't mean the activity is exempt. A seller of services in Georgia, such as a physician, may not perform any of the six activities and thus, the Department of Revenue does not request a physician to report the service provider's gross receipts or exempt

[1] Georgia Department of Revenue (1994) p. 20-21.

receipts.[2] However, if the physician imports equipment for use in providing the service, he or she falls under the second clause and must register and remit any use tax owed on the equipment.

The first and fifth clauses specifically include manufacturers as firms who should register. Several Georgia Department of Revenue officials identified compliance with the use tax by manufacturers as problematic. Manufacturers generally purchase large quantities of exempt materials and sell large quantities of exempt wholesale goods. They also purchase goods that are not "direct" raw materials and provide some merchandise to retailers that will not be sold. Historically, manufacturers generally have not fully complied with the Georgia use tax on these other transactions.[3]

Registration with the Department of Revenue often begins when the vendor contacts the Georgia Department of Revenue Centralized Taxpayer Registration Unit. The vendor is then sent the paperwork to apply for a Certificate of Registration, which must be displayed where customers can view it. This application includes questions about the type of business the applicant engages in and the ownership of the establishment. The vendor is then given a taxpayer identification number and "must file a return for each period even if their business did not operate or there were no taxable sales."[4] The returns are due before the twentieth day of the month following the end of the filing period. This period is monthly if the tax liability is greater than $200 per month and quarterly otherwise.

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[2] The sale of services is exempt from the Georgia sales tax unless specifically identified as taxed.

[3] A recent court case, *Collins v. Prince Street Technologies Ltd.*, has demonstrated the difficulty in collecting use tax on manufacturers' samples (Petrik (1996)). Revenue Regulations had claimed the use tax on samples would be based on the cost of the samples. In the appellate court ruling on the case, the samples are not excluded from the Georgia use tax but the tax must be based on the fair market value of the samples which is zero.

[4] Georgia Department of Revenue (1994) p. 20.

An important issue in sales tax registration is a state's policy regarding retailers with multiple locations. The ideal policy for the vendor would be a choice between consolidated reporting and individual location reporting. For the revenue authority, consolidated reporting represents a trade-off between less paperwork to process each month and less compliance information on the return.

Of the 45 states who have a general sales tax, 24 join Georgia in requiring separate registration for at least some of the multiple location retailers.[5] The remaining 21 allow any vendor with multiple locations to consolidate sales and use tax reporting. In Georgia, vendors are required to consolidate the totals for their sales and use tax liabilities if they have four or more locations. This policy does not allow for true consolidation as vendors must attach separate schedules for each location.

Registrants with the Georgia Department of Revenue receive the forms necessary to remit sales tax collections and use tax liabilities. The Department also provides information, in the form of brochures, tailored to certain types of business activities. These two page publications explain the sales and use tax status for the types of transactions these merchants will face. Hotels, florists and petroleum dealers are examples of the specific types of retailers for whom the brochures are available.

All of the brochures contain general taxpayer information, important telephone numbers and specific tax status information for purchases and sales items commonly made by that type of merchant. The brochure for florists and nurseries, for example, explains that the purchase of fertilizer by florists is tax exempt while the purchase of reusable containers for flowers is taxed.

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[5] Due and Mikesell (1994).

Tax Nexus

The last clause within the listing of who should register with the Georgia Department of Revenue refers to an important, unresolved area in sales tax administration. If a person or firm solicits orders for tangible personal property sales in Georgia, the Department of Revenue considers them to have tax nexus in the state and to be subject to Georgia law. This decision does not, however, necessarily mean the Georgia law will be upheld in federal court.

In general, legal entities who do not consider themselves to be located in Georgia can contest a Georgia tax with two legal arguments.[6] The first argument claims that a Georgia tax on an out-of-state entity violates the entity's due process. The second claims that a Georgia tax on an out-of-state entity violates the Commerce Clause.

In either case, a test must be met for whether the entity has a significant presence in Georgia. If the firm or individual has this presence, federal protection from state tax levies cannot be based on the two claims. For sales and use taxes, the *Quill* case followed the *Bellas Hess* case (summarized in Box A-1) and upheld the rule where physical presence determines nexus. Under the two rulings, an entity can be forced to collect Georgia's sales and use tax if the entity has a physical presence in the state. The significance of the Quill decision, however, lies in the application of the Commerce Clause to sales and use tax levies while other taxes may be challenged with the due process argument. This technical question is important because the test for nexus under due process does <u>not</u> require physical presence.

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[6] See Coalson and Marcus (1995) for a thorough coverage of the major court cases in the area of state tax nexus.

BOX A-1 Supreme Court Decisions and the Determinants of Sales and Use Tax Nexus

National Bellas Hess, Inc. v. Department of Revenue of the State of Illinois --

National Bellas Hess was a retailer located in North Kansas City, Missouri that regularly solicited catalog sales in Illinois and other states. The view of the Illinois Supreme Court, upholding the state's position, was that the distribution of the catalog implied National Bellas Hess was conducting business in Illinois and was required to collect and remit the state's sales tax. The United States Supreme Court overturned the Illinois decision, finding the imposition of the state sales tax violated the Commerce Clause, or burdened interstate commerce. The court contrasted mail communication with a customer having business locations or business agents within the state. Without a physical presence in Illinois, National Bellas Hess had not established nexus and was not subject to the Illinois sales tax laws.

Quill Corporation v. North Dakota --

Quill Corporation was a Delaware company with a physical presence in other states but without a presence in North Dakota. It was, however, North Dakota's sixth largest retailer of office supplies. The North Dakota Supreme Court ruled that the test for Quill's nexus under the Due Process Clause and the Commerce Clause were identical and did not necessarily require a physical presence. The United States Supreme Court over-ruled, finding that Quill could seek relief for the sales and use tax under the Commerce Clause and that nexus required some physical presence. According to Due and Mikesell (1994), the issue is now whether the United States Congress will modify the Commerce Clause test for nexus to include a looser economic presence in a state.

The *Quill* case has not entirely resolved the issue. Many revenue department officials, economists and attorneys agree that in the future, presence will likely extend beyond a physical office in a state.[7] In fact, the Quill decision is interpreted as allowing Congress to legally define economic presence in a state. The minimum physical presence required for nexus today, however, is somewhat unclear.

Another important nexus area has arisen with respect to related entities. In Box A-2, the SFA Folio case is summarized through the Ohio Supreme Court decision. The nexus question in this case is how far, across the corporate structure, can tax nexus extend? The outcome of the case is important to firms considering changes in their organizational structure. For example, a spin-off of

[7] In fact, United States Senator Dale Bumpers introduced S. 545 in March, 1995. The bill requires out-of-state vendors to collect state sales and use tax. It was referred to the Senate Finance Committee and appears to have died there.

a subsidiary in Georgia could hypothetically free a parent company of sales and use tax liability in the state. The SFA Folio case will settle one "affiliate nexus" argument but not the overall affiliation nexus issue, unless an economic presence replaces the current physical presence nexus standard.

Box A-2 Sales Tax Nexus and Related Firms

SFA Folio v. Tracy[1]--

In this case, the Ohio Department of Revenue sought use tax on sales to Ohio residents. SFA Folio is affiliated with Saks-Ohio, both are subsidiaries of Saks & Company, a corporation headquartered in New York. The Ohio Board of Tax Appeals found the corporate relationship created substantial nexus for SFA Folio in Ohio.

The Ohio Supreme Court, however, ruled that the connections between SFA Folio and Saks-Ohio did not create "substantial nexus". The court stressed that Folio had no physical presence and the presence of separate legal entities does not alter that point established by the *Bellas Hess* and *Quill* cases.

[1] *State Tax Notes* (1995)

The legal significance of the tax nexus controversy is clear but the revenue consequences are uncertain. A recent ACIR study estimated the revenue cost of mail order sales for the state sales tax in each of the forty-five states who have a sales tax. In Table A-1, the revenue estimates for Georgia and all states who have a sales tax are presented. From the data, mail order sales would only add between two and three percent to a state's general sales tax revenue. The author of this study used a retailer bottom-up approach, revenue data from the largest mail order firms was summed to give the total catalog sales for the United States. If this approach underestimates the true level of mail order sales, which includes inter-state sales by firms who do not specialize in catalog sales, the revenue significance of exempt mail order sales is again uncertain.[8]

[8] All of the above assumes zero evasion by interstate vendors. If these vendors do not fully comply with a sales tax on mail order sales, the estimate is too high.

Maintenance

There are three important Department of Revenue sales tax forms that are important to the filer maintenance function. The first is the ST-3, the vendor's tax report. This form is used to calculate total state sales and use tax liability and to separate taxable sales among the state four percent tax and the applicable local taxes. On the ST-3, the filer deducts three percent of the first $3,000 in liability, and one half of one percent for the liability over $3,000, of sales tax collections as a fee for collecting the tax on behalf of state and local governments.

In calculating sales and use tax liability, the filer must complete a schedule of exempt sales. These must be classified in one of eight exempt categories.[9] An additional exemption form, ST-5, is required to claim a purchase is for an exempt purpose and this form is discussed below.

An electronic transfer policy exists for large tax collections. If sales and use tax liability is greater than $50,000 per month, the vendor must electronically transfer the tax liability. This transfer requirement threshold will eventually apply to all filers with liabilities greater than $10,000 per month but the Department of Revenue is allowing firms between $10,000 and $50,000 additional time to prepare for electronic transfers.[10] Smaller collectors enclose a check with the ST-3 Sales and Use Tax Report.

The Sales and Use Tax Division attaches instructions for completing the ST-3 to every form. The instruction area is also used by the Division to notify registrants of statutory changes. One important change is the initiation and expiration of special purpose local option sales taxes. Another

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[9] The first seven categories refer to the most commonly claimed exemptions. The eighth is "other deductions authorized by law" and the filer must specify these exemption if this line is not zero.

[10] A $75,000 per month for electronic transfer was lowered to $50,000 per month in December, 1995.

is significant new legislation regarding the taxable status of particular transactions. The Georgia Department of Revenue also warns filers about selected transactions. For example, the form reminds contractors that they are considered to be the final user of all materials and must pay sales taxes at the time of purchase.

The second important form is the ST-5, the certificate of exemption, which is maintained by the seller for a buyer claiming an exempt transaction. The seller keeps one form per purchaser in their records but the form is used to classify the exemption and not to record the value of any exempt purchases.

The purchaser must identify one of the eight exemption types, his or her occupation and the purchaser's Department of Revenue certificate of registration number.[11] Unless the vendor is audited, however, the ST-5 will never be examined by a representative of the Georgia Department of Revenue. If a merchant is audited, the exemption can be questioned. In the ordinary course of business, however, the merchant is only responsible to "exercise ordinary care to determine that the tangible personal property obtained under this certificate is for the purpose indicated".[12] If the exemption appears suspicious in the seller's records, improper use of an ST-5 will be detected.

The ST-5 exemption system is more likely to detect improper transactions where a purchase should rarely be exempt. The system is less likely to detect improper exemptions for transactions that are often exempt. For example, sales from a typically wholesale lumber mill may contain some

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[11] Out of state dealers of motor vehicles, non-residents who purchase motor vehicles and operators of ships plying the high seas all use separate but similar exemption forms.

[12] Georgia Department of Revenue (1995).

illegally exempt purchases of lumber used for construction of real property. Sales of sheet rock, however, would rarely be legally exempt and would stand out upon inspection.

The third important form is the ST-12. If a filer believes sales or use tax was incorrectly remitted to the Georgia Department of Revenue, they use this form to claim a refund. The factual and legal basis of the claim must be listed, as well as the time period covered by the claim.

Anonymous interviews with tax filers, however, have indicated a problem with the ST-12 system. The filers are convinced that any refund claim with the Georgia Department of Revenue will lead to an audit. Thus, the form is believed to carry a risk which negates the gains from correcting a non-compliance problem. It is not clear whether these filers are exaggerating but the act of filing an ST-12 means an individual or firm is revealing non-compliance and their records would be a logical place to look for further non-compliance. The problem with that audit strategy is if it is actually used, the Georgia Department of Revenue is intimidating filers into continuing non-compliance.

The Sales and Use Tax Division holds sales and use tax taxpayer awareness seminars around the state. The seminars are advertised to registered sales and use tax collectors. Nine of these seminars were held in 1995. The seminars are one day events and generally attended by representatives of small Georgia businesses, especially small contractors and accountants who assist low-liability filers. During a seminar, a representative from the Sales and Use Tax Division explains general sales and use tax, the application of local tax rates, report preparation and other areas when requested. The seminars generate frequent questions as vendors ask about particular problems they face in complying with the Georgia sales tax. The Sales and Use Tax Division also holds quarterly

seminars at Clayton State College and workshops through the Georgia Small Business Development Center both of which are less extensive than the taxpayer awareness seminars.

Audits

Audits and penalties are the enforcement tools used to ensure sales and use tax compliance. In this section, we simply describe the structure of the Georgia Department of Revenue's audit function, the general criteria by which audit selections are made and the general procedures an auditor follows. Obviously this description is limited, because detailed public information about Georgia's audit methods could compromise the audit function.

Georgia's Department of Revenue organizational structure is atypical in that sales and use tax audit duties are allocated to three separate divisions. The Central Audit Division is responsible for large firms and the Division's auditors are all based in the Atlanta headquarters. Auditors for the Field Services Division operate out of eleven offices within Georgia and audit smaller firms. The Sales and Use Tax Division employs separate desk auditors in the Atlanta office to review returns, but these auditors do not conduct field audits.

Central Audit

The Central Audit Division is charged with the task of monitoring collections from large firms operating in the state.[13] The Division employs approximately 109 auditors in the Atlanta

[13] The exact size criteria for the firms monitored by the Central Audit Division is not public information.

office; an additional 15 auditors operate from the regional offices.[14] The auditors do not specialize in a particular tax; they are familiar with all state collected taxes and audit for Georgia's corporate income tax, sales and use tax and personal income tax withholdings. The majority of Central Audit Division auditors are based in Atlanta but they frequently travel to firm locations to perform audits. The Central Audit Division determines Georgia sales and use tax liability after inspecting all transactions by multi-state firms; therefore, trips to firm headquarters in other states are often necessary.

Audit selection is a centralized process for the Central Audit Division. Selection can be based on several factors including spin-off leads, tips, information from a firm's returns, the firm's compliance history, and random drawings from the firms who fall under the responsibility of the Central Audit Division.

The likelihood of an audit can increase based on three pieces of information. First, the Central Audit Division shares information with the revenue authorities in other states, and these states reciprocate. This can lead to "audit tips". Second, filers who operate in certain sectors of the state's economy are more likely to be audited when compliance in that sector has been found to be problematic. Additional audit selections for the Georgia use tax have also been based on press coverage of new business openings or expansions.

A Central Audit Division audit is initiated with a letter to the vendor. The vendor is given approximately six months notice and is visited by a member or members of the Division. Since the Central Audit Division is responsible for larger firms with numerous transactions, the auditors select

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[14] These offices are located in Albany, Athens, Atlanta, August, Columbus, Douglas, Lithia Springs, Macon, Rome, Savannah and Tucker.

a block of transactions to investigate for a given tax year. If the firm agrees to the selection period, the tax liability from the company's books is compared with the tax returns. This investigation can include cash register receipts. Any estimated underpayment based on the results of the "transaction block" is then extrapolated to determine additional liability for the year in question. As an alternative to the transaction block approach, an audit may cover all transactions for the full tax year.

New Central Audit Division auditors are trained on-the-job by accompanying more experienced auditors. After about a year of apprenticing, a new auditor can perform an audit without direct supervision. The Central Audit Division also providers auditors with a procedural manual for additional guidance.

Field Services

The Field Services Division takes a different audit approach from the Central Audit Division. Field Services auditors operate out of eleven regional offices within the state. The division has 22 full-time auditors, 60 delinquent tax collectors and 160 tax field agents. Field agents are part-time auditors but the allocation of their time to audit duties depends on their work load. Field Services is also responsible for providing taxpayer information, assuring compliance with filing deadlines, collecting delinquent accounts, investigating illegal tax activities, regulating the alcoholic beverage and tobacco industry and enforcing motor fuel tax laws. New auditors in the Field Services Division are generally promoted from within the system. This approach reduces the need for extensive new Field Services auditor training.

Audit selection in the Field Services Division is generally based on the same criteria as the Central Audits Division. Spin-off leads, tips, information from a firm's returns and random

drawings are all used, but selection decisions are made at the regional offices. Special audit projects, however, are occasionally initiated by the Field Services director where the regional offices are instructed to select audits in conjunction with the project. For example, a compliance profile for a specific type of retailer is currently being prepared as part of a Field Services audit project.

Field Services auditors follow the same procedural manual used by the Central Audits Division. Interviews with representatives of both divisions, however, indicate that a Field Services auditor has greater authority outside the manual. One obvious difference is that the Field Services Division often audits firms with a less comprehensive bookkeeping system. This means that the auditor must use any available information to arrive at the best possible estimate of a firm's sales and use tax compliance. Second, Field Services auditors can initiate audits with either written or telephone notification.

Sales and Use Tax Division

The Sales and Use Tax Division employs three independent auditors to review sales and use tax returns. The returns are checked and any mathematical discrepancies are reviewed by the auditors in the Sales and Use Tax Division. They also examine the allocation of local sales and use tax liability and the schedule for exempt sales on selected returns.

Vendors whose returns have calculation errors are notified by mail. Auditors for the Sales and Use Tax Division do not, however, audit outside of the Revenue Department and generally do not use materials other than the division's reports filed by the vendor. Information within the Sales and Use Tax Report and other vendor filed paperwork can also lead the desk auditor to notify either the Central Audits Division or the Field Services Division of the need for a full-scale audit.

Exempt transactions are a specific area of focus for the Sales and Use Tax Division auditors. If a taxable transaction is improperly classified as exempt, it can often be determined from the Atlanta office. The disadvantage of a desk audit is the limit on available information. A desk auditor is not able to investigate the proper use of an exemption when the purpose may or may not be exempt. Sales to non-profits and public entities, for example, are exempt when the entity is specifically identified in the *Official Code of Georgia*. A desk audit may not be able to correctly determine, from the seller's sales and use tax report, if the purchaser qualified for the exemption.

Penalties and Appeals

In the case of an audit from either the Field Services Division or the Central Audits Division, a proposed audit finding is sent approximately 30 days after the audit. Additional sales or use tax liability, if any, is assessed in the finding and a majority of vendors agree to the initial audit finding. Principal and interest are routinely included, if applicable, but penalties are often waived for the first non-compliance finding against a vendor. Fraud, non-filing or repeated non-compliance are three audit findings where penalties are always applied.

Appeals of the audit findings begin with the director of the division who initiated the audit. Next, a vendor may appeal to the Sales and Use Tax Division for a ruling on the sales or use tax dispute. If the vendor is not satisfied with the ruling, the vendor can take one of two routes. The first is to appeal the ruling to the Superior Court in the county in which the vendor is located. The second is an appeal to the Office of State Administration Hearings.[15] The latter approach reduces

[15] This appeal route was introduced July 1, 1995. Prior to that date, an appeal could be requested through the Georgia Department of Revenue Deputy Commissioner's office.

legal costs and, typically, the time required for a third party review. Further appeals from either route follow the normal appeals hierarchy.

Other Audit Issues

Centralized Audit Selection

The Field Services Division and the Central Audit Division take different approaches to audit selection. The Central Audit Division centralizes the function while the Field Services Division allows auditors and division office managers throughout the state to choose from their potential audit population. The audit population for each of these two divisions have different characteristics but an important question is whether further Georgia Department of Revenue centralization would improve the Department's audit function and increase sales tax compliance.

Due and Mikesell (1994) identify three reasons for centralized audit selections. First, audit selection is the primary mechanism by which a state's revenue authority applies the state's compliance standard. Decentralized selection can interfere with the goals of the authority. Second, evaluation of auditors and audit productivity is easier and more accurate if audit selection is a centralized process. Third, data for the filing population are centrally located. While a locally available database can include tax return information, other relevant pieces of information may be located in the central office.

The arguments put forth by Due and Mikesell indicate that compliance efficiency of Georgia's Department of Revenue will improve under more centralized audit selection in the Field Services Division. It should be remembered, however, that the Field Services Division audits a population that is quite different from the typical firm covered by the Central Audits Division.

Larger firms are not perfect tax compliers but according to representatives of the Central Audits Division, these firms rarely outright evade Georgia's sales and use taxes. Smaller firms may somehow behave differently and evasion may be more likely. Or, compliance problems may occur among vendors within one area of Georgia. In this case, statewide audit selection may fail to identify the problem. The important question is whether decentralized auditors and regional managers have information that centralized audit selection will fail to utilize.

Audit Specialization

The Field Services Division is responsible for audits and timely taxpayer compliance, providing taxpayer information, collecting all delinquent accounts, investigating illegal tax liability activities, administering and enforcing the tax laws on alcohol and tobacco products and enforcing the motor fuel tax.[16] Revenue authorities generally separate auditors from divisions that perform these other types of functions.

According to Due and Mikesell (1994), revenue authorities have incorporated sales and use tax auditors under the sales and use tax division. Recently, the trend with regard to this structure has been towards integration of the audit function with respect to all taxes. Due and Mikesell found that 15 states had complete audit integration in 1993, compared to only 5 in 1970. Further, no state was identified as having a multi-function audit staff similar to the structure of Georgia's Field Services Division. Due and Mikesell observed that, "States often keep selective excise audit--alcohol,

[16] State of Georgia. 1994. *Budget Report: Fiscal Year 1996.* Author: Atlanta, GA.

tobacco, and motor fuels--in separate divisions, again because of specialized audit and enforcement issues."[17]

The important issue here is whether experience with the other duties of the Field Services Division improves the audit abilities of the division's staff. If the habits of delinquent taxpayers and the provision of taxpayer information improves an auditor's abilities, centralizing the audit function will probably not improve the Georgia Department of Revenue's audit efficiency. If the other duties are a distraction or interfere with the audit function, centralization will be beneficial.

Self Audits and Courtesy Audits

The self audit is a relatively new approach to tax compliance. In a self-audit, vendors examine their own records for outstanding liability and an auditor is available to oversee vendor compliance examination. Pennsylvania has used this audit technique to inform certain professions of use tax liability and to allow these firms to determine their compliance and remit outstanding use tax liability.

Ohio has recently allowed introduced a self-audit program to improve the audit coverage of the revenue authority. For comparison purposes Ohio's economy is approximately 63 percent larger than Georgia's -- based on 1994 Personal Income -- while Ohio's audit staff is about 150 percent larger than Georgia's. Clearly, Ohio dedicates more resources to its audit staff but if the self-audit program improves an auditor's productivity, the program means the audit function in Ohio is far more aggressive than that in Georgia.

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[17] Due and Mikesell (1994) p. 211.

In a courtesy audit, an auditor visits a new firm with the intention of demonstrating where discrepancies have arisen during the firm's brief operation. Again, there are no penalties involved, since the objective is to correct compliance problems early. These audits were used in Iowa and New Mexico in the 1970s and 1980s but are not a popular topic in the trade publications today. The disadvantage of the compliance audit is the benefits are not fully evident when compared to audit settlements following non-compliance. Since auditor collections are important in today's audit division evaluations, the incomplete information from compliance audits put their supporters at a disadvantage.

APPENDIX B

SPECIFIC EXEMPTIONS FOR THE GEORGIA SALES TAX

Exemption Number	Transactions the sales and use tax will not apply to:	Exemption Class
(1)	Sales to the federal government;	Public and non-profit transactions
(2)	Purchase of materials by individuals performing selected United States and county government contract work;	Public and non-profit transactions
(3)	Federal excise taxes;	Federal mandate
(4)	Sales and fares of public transit facilities;	Public and non-profit transactions
(5)	Fares collected by an urban transit system;	Public and non-profit transactions
(6)	Purchases by a qualified hospital authority;	Public and non-profit transactions
(7)	Purchases by a qualified nursing homes;	Public and non-profit transactions
(8)	Purchases by the University System of Georgia;	Public and non-profit transactions
(9)	Purchases by qualified private colleges and universities;	Public and non-profit transactions
(10)	Purchases by qualified private elementary and secondary schools;	Public and non-profit transactions
(11)	Purchases by qualified educational or cultural institutes;	Public and non-profit transactions
(12)	Lunches sold in public schools;	Public and non-profit transactions
(13)	Lunches sold in qualified private schools;	Public and non-profit transactions
(14)	Display purchases by qualified museums;	Public and non-profit transactions
(15)	Selected sales by religious institutions or denominations;	Public and non-profit transactions
(16)	Sale of Holy Bibles and similar books;	Public and non-profit transactions

Exemption Number	Transactions the sales and use tax will not apply to:	Exemption Class
(17)	The sale of fuel and supplies for use aboard ships, interstate and international trade only;	Interstate commerce concerns
(18)	Fees for the transportation of tangible personal property;	Special interest
(19)	Tangible personal property brought to Georgia by new residents;	Special interest
(20)	The sale of water through pipes;	Special interest
(21)	Transfers of property in qualified business reorganizations;	Special interest
(22)	Inconsequential elements within exempt service transactions;	Special interest
(23)	Repair labor charges when separately invoiced;	Special interest
(24)	Film rental to any person who charges an admission fee;	Special interest
(25)	Qualified agricultural materials;	Production inputs
(26)	Machinery and equipment purchased for farm use;	Production inputs
(27)	Sugar purchased for raising commercial honeybees;	Production inputs
(28)	Sales of qualified animals when sold for breeding purposes;	Production inputs
(29)	Sales of selected agricultural machinery;	Production inputs
(30)	Sales of vehicles funded by United States Department of Veterans Affairs grants;	Public and non-profit transactions
(31)	Sales of property assembled in Georgia when delivery is taken outside of Georgia;	Interstate commerce concerns
(32)	Sales of transportation equipment for use outside Georgia when delivery is taken in Georgia;	Interstate commerce concerns
(33)	Commercial transportation vessels to be used for interstate transportation;	Interstate commerce concerns
(34)	Sales of selected manufacturing machinery;	Interstate commerce concerns
(35)	Sales or use of selected industrial materials;	Interstate commerce concerns
(36) and (37)	Sales of pollution abatement equipment;	Special interest
(38)	Sales and fees collected by the Rock Eagle 4-H Center;	Public and non-profit transactions
(39)	Sales of concessions or admission to qualified public or private schools;	Public and non-profit transactions

Exemption Number	Transactions the sales and use tax will not apply to:	Exemption Class
(39.1)	Use of cargo containers for interstate and intrastate commerce;	Interstate commerce concerns
(40)	Sales of components and parts for military equipment;	Public and non-profit transactions
(41)	Purchases by nonprofit Georgia orphans' homes;	Public and non-profit transactions
(42)	Use through qualified lease-backs when the property has already been taxed;	Special interest
(43)	Gross revenues from coin operated amusement machines which require a permit fee;	Special interest
(44)	Sales of motor vehicles for immediate export to other states;	Interstate commerce concerns
(45)	Sales of paper stock which is manufactured in Georgia into catalogs intended to be used outside Georgia;	Interstate commerce concerns
(46)	Sales to nonprofit blood banks;	Public and non-profit transactions
(47)	Sales of prescription drugs, eyeglasses and contact lenses;	Special interest
(48)	Sales of crab bait;	Special interest
(49)	Sales of fuel to heat a structure where poultry are raised;	Special interest
(50)	Sales of insulin and insulin syringes;	Special interest
(51)	Sales of oxygen prescribed by a licensed physician;	Special interest
(52)	Sales of hearing aids;	Special interest
(53)	Sales for which food stamps or WIC coupons are used;	Federal mandate
(54)	Sales of medical equipment paid for under Medicare or Medicaid;	Federal mandate
(55)	Sales of lottery tickets.	Public and non-profit transactions

Source: *Official Code of Georgia Annotated, 1994 Cumulative Supplement*, Title 48, Chapter 8, Section 3.

APPENDIX C

The Georgia Sales Tax Equity Model

An estimate of sales tax burden should be based on actual household-level data. While no household spending data specific to Georgia exist, the United States Bureau of Labor Statistics (BLS) records household-level spending behavior in the *Consumer Expenditure Survey (CES)*. These data are the best available information about how households in the United States allocate their budgets.

The BLS aggregates reported spending on goods and services into approximately 20 categories. These category data are referred to as the "Summary Expenditure Data within the Consumer Unit Characteristics and Income File" in the *CES*. The categories include food at home, food away from home, alcoholic beverages, housing, utilities, household operations, house furnishings, apparel, vehicles, gasoline, public transportation, health care, entertainment, personal care, reading materials, education, tobacco, miscellaneous, and personal insurance. We estimate the Georgia sales tax base for each household as the sum of food away from home, alcoholic beverages, utilities, household operations, house furnishings, apparel, vehicles, gasoline, entertainment services, reading materials, tobacco and miscellaneous expenditures.

We construct a profile of Georgia households with two adjustments to the data in the *Consumer Expenditure Survey*. The first is to match quarterly expenditure data with annual income data. Households report expenditures for each month that they participate in the Survey, and the United States Bureau of Labor Statistics calculates quarterly spending totals by commodity class. Income, however, is reported for the year prior to participation and after four quarters of

participation. For our purposes, the easiest way to match the quarterly expenditures with annual income is by extrapolating annual expenditure levels using the quarterly data.

The second adjustment is the assignment of weights to each household in the Survey. The United States Bureau of Labor Statistics identifies 1,108 urban observations as households who resided in Georgia between January 1991 and March 1993. Since rural households are not identified and 1,108 represents less than one-half of one percent of the households in the state, this model contains observations for the full southeast region sample of urban households and the national sample of rural households. The United States Bureau of Labor Statistics does not provide any state or region of residence for rural households.

Each observation is weighted in an attempt to reach two aggregate targets. The first target is the rural/urban mix in the state according to race (from the United States Bureau of the Census, *1990 Census of Population and Housing*). The second is the income profile of the state as calculated by Maguire (1996). Therefore, if the sample is over-represented by white suburban families who earn between $35,240 and $46,894, then these households receive a relatively small weight.

Relative to the averages for the southern region, published by the United States Bureau of Labor Statistics (1994), the Georgia model performs well. The average Georgia household earns slightly less than the average BLS southern region household, but the BLS region includes Virginia and Maryland, as well as the deep south. The presence of households in these higher income states contributes to the discrepancy.

Within the household spending class we call "narrow taxable expenditures", one finds some spending discrepancies between the two expenditure profiles. The average Georgia household spends relatively less on restaurant meals (food away from home), household furnishings, household

equipment and apparel. Overall, however, we find the households in the Georgia model spend much in the same manner as households in the BLS-reported southern region.

The total state-wide sales tax liability as estimated using this method does not compare well with actual sales tax collections in Georgia. The model reports a total tax liability of $1.3 billion for 1992, or about 47 percent of total collections. This discrepancy is consistent with the findings of Ring (1989) but clearly is a limitation of this approach.

There are three reasons for the aggregate collection discrepancy. First, we calculate a direct liability for each household. These calculations do not capture indirect liabilities. For example, if the household purchases a new home, the home could easily contain $30,000 in building materials and the housing purchase does not explicitly include a $1,200 sales tax liability. We have followed the authors of other studies in omitting these indirect burdens (a well-publicized study of state tax system vertical equity by the Citizens For Tax Justice (1996) study is a recent example). A portion of the total revenue shortage is certainly due to this omission.

A second source of variation is caused by sales tax collections from non-Georgians. Sales tax paid on taxable commodities purchased in Georgia by visitors, will not be included in our estimates but will of course be included in actual collections. These "tax exports" are an important source of state revenue but it should be remembered that Georgians also pay taxes in other states, and our calculations do not reflect these taxes.

The third source of variation is within the *Consumer Expenditure Survey* itself. There are several commodities within the Survey where participants are believed to under-report actual spending. Branch (1994) explored this under-reporting by comparing the Survey totals to the National Income and Product Accounts (NIPA). For every alcoholic beverage dollar expenditure

reported in the Survey, the NIPA methodology totaled $2.50. Other examples of under-reporting expenditure items include expenditures on textiles, reading materials and vehicle rental and repairs. Since the NIPA consumption data should not contain firm-to-firm purchases, this under-reporting could be a large source of the discrepancy between spending totals and state sales tax collections.

APPENDIX D

The Calculation of Vertical Equity with Expenditure Classes (The Permanent Income Approach)

Our attempt to measure the effective sales tax rate across expenditure classes begins with the same households that were grouped into income classes for the calculations in Table 25. These households (see Appendix C) are weighted to represent the best simulation of the income and spending behavior of true Georgia households. One can therefore examine the change in effective sales tax rate as household expenditures change.

Simply ranking these households by the total expenditure level, however, ignores the problem created by infrequent purchase of consumer durables. For example, a household may spend $20,000 a year for an average year. In a year when the household buys an automobile, however, the household may report spending of $38,000. If one ignores this infrequent behavior, one finds that households in the high-expenditure classes were far more likely to have purchased a durable and this household does not belong in high-expenditure class.

The solution proposed by Casperson and Metcalfe (1993) is to estimate a durable purchase level, with the data from households who actually purchased a durable, for all households in the sample. We follow this methodology and estimate parameters for the following model,

$$e_d = \alpha + \beta_1 income + \beta_2 e_{nd} + \beta_3 (e_{nd})2 + \beta_4 hhsize + \beta_5 female + \beta_6 non\text{-}white + u_t$$

where e_d is expenditure on an automobile (durable), e_{nd} is total spending on all other commodities, *hhsize* is the size of the household, *female* is a dummy for a household with a female head-of-household, *non-white* is a dummy for a household where the head-of-household is not Caucasian.

We depart from the Casperson and Metcalfe (1993) methodology in that we do not assume labor-market characteristics, outside of household income, affect household spending on an automobile.

The estimates from this model appear in the Table D-1. The signs on the significant variables confirm a priori expectations, e.g. wealthier households spend more on automobiles. Larger households spend less on automobiles, holding the other variables constant, and the female and non-white dummy variables have a statistically insignificant effect. The coefficient of variation, R^2, for this model, however, is a relatively low 0.16. This means that the range of predicted automobile purchase values across households, as calculated from the estimates of this model, is small. Further, households will be assigned a purchase value that is fairly close to the average of all expenditures. The denominator which is used in Table 26 and Table 28 is the sum of the predicted purchase value and all other, actual household expenditures.

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